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FINAL REPORT ON HEAD START EVALUATION AND RESEARCH--1966-67 TO THE INSTITUTE FOR EDUCATIONAL DEVELOPMENT. SECTION VIII, RELATIONSHIPS BETWEEN SELF-CONCEPT AND SPECIFIC VARIABLES IN A LOW-INCOME CULTURALLY DIFFERENT POPULATION.

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DESCRIPTORS- *SELF CONCEPT, ANGLO AMERICANS, MEXICAN AMERICANS, NEGROES, *DISADVANTAGED YOUTH, TEACHER RATING, *ACHIEVEMENT, SPEECH SKILLS, *SOCIAL VALUES, *LOW INCOME GROUPS, MIDDLE CLASS VALUES, ETHICAL VALUES, RATING SCALES, INFERRED SELF CONCEPT SCALE, HEAD START,

ANGLO, NEGRO, AND MEXICAN-AMERICAN CHILDREN WERE STUDIED TO INVESTIGATE FUNCTIONAL RELATIONSHIPS WHICH EXIST BETWEEN THE SELF-CONCEPT OF THE LOW-INCOME, CULTURALLY DIFFERENT CHILD AND CERTAIN ORGANISMIC (RACE, SEX, FAMILY SIZE, BIRTH ORDER, GRADE LEVEL) AND BEHAVIORAL (ACHIEVEMENT AND INTELLIGENCE TEST RESULTS) VARIABLES. ONE HUNDRED AND EIGHTY CHILDREN (30 EACH IN GRADES 1 THROUGH 6) WERE RATED ON A 30-ITEM, 5-POINT, INFERRED SELF-CONCEPT SCALE DEVELOPED FOR THE STUDY. RATINGS MADE BY THE CHILD'S TEACHER AND THE SCHOOL COUNSELOR WERE USED TO TEST SCALE RELIABILITY AND VALIDITY, BUT ONLY THE TEACHERS' RATINGS WERE USED IN THE ANALYSES OF HYPOTHESES. CORRELATION OF SELF-CONCEPT RATINGS WITH THE ABOVE VARIABLES SHOWED THAT THE CHILDREN VIEWED THEMSELVES POSITIVELY. AFTER 6 MONTHS OF SCHOOL, THE CHILDREN WERE AGAIN RATED BY TEACHERS AND ANALYSIS OF THE DATA SHOWED (1) THAT SELF-CONCEPTS OF ALL THE EXPERIMENTAL CHILDREN HAD DECLINED SIGNIFICANTLY, (2) THAT INADEQUATE VERBAL SKILLS (FOUND IN THE MEXICAN-AMERICAN CHILDREN) WERE RELATED TO LOW SELF-CONCEPTS, AND (3) THAT IT CANNOT BE ASSUMED THAT ALL MEMBERS OF ONE SPECIFIC RACE OR ECONOMIC CLASS HAVE LOW SELF-CONCEPTS. SINCE THIS EXPERIMENT WAS BASED ON THE THEORY THAT SOCIAL PRESSURE FORMS SELF-CONCEPT, ONE CONCLUSION IS THAT CHILDREN MUST FEEL THAT THERE IS PERSONAL VALUE IN ACHIEVING MIDDLE CLASS GOALS IF THEY ARE TO ACHIEVE IN SCHOOL. THEREFORE, ACHIEVEMENT MUST BE POSITIVELY RELATED TO THE VALUE SYSTEM OF A SPECIFIC POPULATION. (MS)

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FINAL REPORT ON
HEAD START EVALUATION AND RESEARCH: 1966-67

(Contract No. 66-1)

TO

THE INSTITUTE FOR EDUCATIONAL DEVELOPMENT

by

The Staff and Study Directors

CHILD DEVELOPMENT EVALUATION AND RESEARCH CENTER
John Pierce-Jones, Ph.D., Director
The University of Texas at Austin

August 31, 1967

Section VIII: RELATIONSHIPS BETWEEN SELF-CONCEPT AND SPECIFIC VARIABLES IN A LOW-INCOME CULTURALLY DIFFERENT POPULATION

by

Elizabeth Logan McDaniel

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ABSTRACT

The purpose of this investigation was to determine functional relationships which exist between the self-concept of low-income culturally different children and specific organismic and behavioral variables. The organismic variables examined were: race, sex, family size, birth order, and grade level. Behavioral variables consisted of test responses on standardized group tests of intelligence and of achievement. In addition, changes in self-concept after six months of school attendance were examined. The development of an instrument, considered suitable for assessing the self-concept of the low-income culturally different child in a school setting, was undertaken in order to obtain the data.

The Inferred Self-Concept Scale was constructed by having eight judges of varying professional backgrounds (all of which attest to expertise in assessing the behavior of children) select items from a 100-item list that each thought would be useful to teachers, counselors, and others

for appraising a student's self-concept. Seventy-five percent of these judges achieved consensus on 37 of the items. Seven of the 37 items were omitted from the final scale because they appeared to be repetitious.

The teacher of each child involved in the study and the counselor at the school where the child was a student were asked to rate, independently, these children on the 30-item, 5-point self-concept scale. This procedure was repeated in six months. Intelligence and achievement test scores were obtained from personal cumulative folders. Personal data necessary for classifying the children according to specific organismic variables were also obtained from these folders.

The population which provided the data for this study was composed of students, teachers, and counselors at 16 public elementary schools which are receiving financial assistance under Title I of the 1965 Elementary and Secondary Education Act. The analysis of data was limited to that provided by all of the counselors (16) and 90 of the teachers in these schools. The subjects, about whom the data were provided by these teachers and counselors, were 180 children, 30 each (15 males and 15 females selected

randomly) from grades 1,2,3,4,5, and 6 in attendance at these schools.

In the evaluation of the Inferred Self-Concept Scale, Pearson product-moment correlation coefficients significant at the .01 level were obtained for both examiner reliability and for test reliability. A reliability coefficient of .58 was obtained between total scale scores for the examiners; split half reliability coefficient of .86 and .86 were obtained for counselors and teachers, respectively; and a test-retest reliability coefficient of .66 was obtained for the total sample. Criterion-oriented validity studies of the scale also obtained significant results. An image analysis of the scale items revealed that two factors, titled "Self-Conformance" and "Self-Attitude" by the experimenter, accounted for 66 percent of the common total variance.

Analysis of the data reveals that the self-concept of the low-income culturally different child in the elementary school setting is scored as "positive" on the Inferred Self-Concept Scale, whether the child is Anglo, Mexican-American, Negro, male, female, from a large family, from a small family, an oldest child, a non-oldest child, or whether the child is in grade 1,2,3,4,5, or 6. In examining differences between: races, sexes, grade levels, family sizes, and between birth orders, the only significant difference obtained was that between races, with Anglos having a self-concept significantly different from Mexican-Americans, but not significantly different from Negroes. Further investigation revealed that this difference was significant (.01) only in the fifth grade. There was no significant difference between groups in the amount of change during the six months period between ratings of self-concept, although it was determined that self-concept decreased significantly for the total sample during the six months period. Significant relationships were established between self-concept and intelligence for Negroes, males, females, children from smaller families, oldest children, fifth graders, and for sixth graders. No significant relationships were established between self-concept and achievement, when intelligence was held constant, for any of these groups.

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CHAPTER I

THE PROBLEM

The basic problem of this investigation was to determine functional relationships which exist between the self-concept of the low-income culturally different child and specific organismic and behavioral variables. The organismic variables which were investigated included group classifications according to race, sex, family size, birth order, and grade level. The behavioral variables consisted of test responses on standard group tests of intelligence and of achievement. In addition, changes in self-concept for each of these groups after six months of school attendance were examined. The development of an instrument suitable for assessing the self-concept of the low-income culturally different child in a school setting was undertaken in order to obtain the data.

Basic Assumptions

Self-Concept Can Be Inferred

A basic assumption underlying the development of the Inferred Self-Concept Scale was that the "self-concept" can be inferred from behavior. Many theorists concur with this assumption. Among these, Horney (1937, 1945) has explicitly stated that inferences from observations and reactions to an individual give us an understanding as to the meaning of what he says and does. Sullivan (1947) has suggested that the self is made up of "reflected appraisals. . . ." He maintains that the earliest experiences which influence the development of the self are experiences with people and that the child's earliest self-appraisal is in terms of what others think and feel about him. Bown (1967) has said ". . . basically we are dependent on others to tell us what we are, and when we lose this, we lose touch with what we are." George Mead (1934) is among those who have emphasized the social origins of the self.

> The self . . . is essentially a social structure, and it arises in social experience . . . it is impossible to conceive of a self arising outside of personal experience [p. 140].

Snygg and Comb (1949) maintain that there is a one-to-one relationship between the person's phenomenal field and his outward behavior. Erikson (1956), too, has suggested that the child will see himself as others see him--and will act in accordance with this self-concept. For those who agree with the viewpoint presented--that the individual sees himself as others see him and behaves in accordance with this concept of self it would seem logical to assume that the individual's self-concept can be inferred from his behavior.

Self-Concept Is Acquired and Can Be Changed

The fundamental assumption underlying this investigation is that self-concept is acquired and, therefore, can be changed. It is assumed that the concept of self manifested in the school setting has been influenced by, and is the result of, various antecedent causes. For example, the influence on personalities of young children of patterns of child rearing and parent behavior has been investigated by Sears, Maccoby, and Levin (1957), and Whiting and Child (1953, 1962), among others. In general, studies such as these have investigated development in the child up to age six or so. Recently, however, it has become apparent that the middle-childhood period also has significance for personality development, and the elementary school has assumed prominence as an agent of great influence. Sears and Sherman (1964) have pointed out that it is here that children between the ages of five and 12 spend a large proportion of their waking hours and develop, under guidance, their reasoning and inquiry skills. Here they find their place and their influence in a group of children their own age and develop their own senses of competence in relation to real work. "Through meeting tasks that are challenging to them, children learn to cope with the real world. Self-concepts of competence in work emerge gradually, enabling the children to meet subsequent challenges with a calm confidence [pp. 2-3]."

The importance of the child's self-image as a factor in learning has also been emphasized.

> . . . The self-concept represents expected success in the child's endeavors to meet these problems and tasks [of development]. The self-concept is complex, made up of many facets, with each facet differing in importance--or reward value--from the others. Expectancies have been learned for each facet, so that the individual can predict success or failure in connection with behavior that pertains to a given facet. These expectancies have been acquired and can be changed according to principles of learning [Sears and Sherman, 1964, p. 10].

In addition to Sears and Sherman (1964), Goldberg (1963) and others, Passow (1963) has suggested that children who do not acquire a sense of competence may become dissatisfied with themselves, unfriendly to those around them, resistant to authority, and perhaps rebellious against society. Studies of delinquents suggest that in many cases where the school is unable to give the individual a sense of competence, he tries to maintain a sort of "self-esteem" by antisocial means (Erikson, 1951). White (1959, 1960), too, has repeatedly stressed the importance of the concept of competence as a motivational force.

It seems apparent that there is a continuous impact between the self-concept and the flow of experiences involved in the process of living and learning at school. One of the major issues confronting education today, therefore, would appear to be determining and providing the conditions necessary for helping children from all segments of our population acquire attitudes of self-acceptance which are accurately founded on feelings of competency in some area.

This investigation has attempted to contribute to the information needed in order to resolve such issues by determining (by inference from observed behavior) the self-concept of the low-income culturally different child in school. It has considered the question "Does the typical child from this population manifest a negative self-image?" and taken the position that this commonly assumed attribute is a characteristic possessed only by specific groups within this population and that such a generalization is not applicable to the population as a whole. Self-concept has been assessed on the Inferred Self-Concept Scale, which has a possible range in score from 30 to 150; scores below 90 indicate self-concepts which are negative on this scale while scores above 90 indicate self-concepts which are positive.

Hypotheses

Hypothesis I There will be significant differences in mean self-concept scores for children classified according to: *Race*: Anglo, Mexican-American, Negro; *Sex*: Male, Female; *Family Size*: Large-sized (five or more children) family, Small-sized (four or fewer children) family; Birth Order: Oldest children, Non-oldest children; Grade Level: Grades 1, 2, 3, 4, 5, 6.

It seems probable that specific subgroups of children (i.e., Anglos or Mexican-Americans or Negroes) within this low-income culturally different population gradually develop concepts of self which are quite different (one group may become more self-confident while other groups may become less self-confident) and that these differences in direction may be related to the length of time the children have been in school. These specific differences need to be determined so that the pooling of ratings for all groups in all grades does not confuse the results which are obtained. Thus, it is proposed that:

Hypothesis II

There will be significant differences in mean self-concept ratings at some grade levels but not at other grade levels for children classified according to (a) Race, (b) Sex, (c) Family Size, (d) Birth Order.

In addition, it seems likely that the concepts of self which develop within specific subgroups may take place more rapidly in one year than another. For example, ability to excel in physical sports becomes increasingly important in the upper elementary grades for males. Different expectations for other specific groups after varying periods in school might be expected to affect the development of their concepts of self. Therefore, it is proposed that

Hypothesis III There will be significant differences in mean self-concept ratings among the six different grade levels for the following subgroups of children: (a) Anglos, (b) Mexican-Americans, (c) Negroes, (d) Males, (e) Females, (f) Children from large-sized families, (g) Children from small-sized families, (h) Oldest children, (i) Non-oldest children.

The relationships of achievement and intelligence to self-concept have not been clearly established, especially for low-income culturally different populations. In general, studies seem to indicate that achievement is positively related to self-concept (Bodwin, 1959;

Coopersmith, 1959; Lumpkin, 1959; Davidson & Lang, 1960; Seay, 1961; Lamy, 1965). However, some question about this "general" finding arises when it is applied to a low-income culturally different population where achievement may not have the same motivating force that it has in some other populations. Deutsch (1960), for example, found no direct relationship between self-image and achievement in his study of a Negro population. The present study has attempted to establish relationships or trends which are meaningful for the low-income culturally different population, Therefore, the relationships of achievement and intelligence to self-concept in a low-income culturally different population have been investigated and an attempt has been made to establish the relationship of achievement to self-concept, with the effect of intelligence on scores held constant. An attempt to establish the relationship of intelligence to self-concept (with the effect of achievement on scores controlled) has also been made. In regard to achievement, this investigation takes the position that the child who scores high in intelligence is apt to be aware of any discrepancy between his ability and his achievement; therefore, a lack of achievement on the part of the intelligent child should cause him to have a relatively low or negative self-concept despite, or in addition to, the value of achievement for his particular culture. A lack of achievement on the part of the less intelligent student should not affect his self-concept in any consistent manner since there will be no discrepancy; the value of achievement for him would depend on the value system he reflected. Since achievement is presumed to have different effects on the self-concept of the intelligent and nonintelligent student, there should be no significant relationship between self-concept and achievement if intelligence is held constant. Thus:

Hypothesis IV (a) No significant relationship will be found between self-concept and achievement, with the effect of intelligence held constant.

Conversely, there should be a significant relationship between self-concept and intelligence, with achievement held constant since the typical intelligent student receives praise or reward for accomplishments which are not measurable as achievement scores. He is given leadership and other responsibilities which should enhance his self-concept. Thus:

Hypothesis IV

(b) A significant relationship will be found between self-concept and intelligence, with the effect of achievement held constant.

It seems probable that self-concept is, indeed, influenced by an individual's ability to express himself--his ability to communicate with others socially and also to convey the learning he possesses. The lack of such ability could cause him to appear less capable than he actually is and could tend to depress his reflected self-concept. An abundance of such ability could, conversely, enhance his self-concept. Assuming this position, it is proposed that:

Hypothesis V

(a) A significant relationship will be found between self-concept and the specific behavioral variable, language intelligence, as measured by test scores on a standard test of intelligence.

On the other hand, lack of ability to do computational work should not as directly affect the self-concept since this lack is not as obvious to others, except in specific situations, as is a lack of verbal ability. In fact, this investigation takes the position that self-concept will not be affected in any consistent manner by nonlanguage intelligence. Therefore, the contention is:

Hypothesis V (b) No significant relationship will be found between self-concept and the specific behavioral variable, nonlanguage intelligence, as measured by test scores on a standard test of intelligence.

The impression that the child's experiences of success or failure in school will be related to self-concept and that changes in self-concept will reflect these experiences is implied by many writers. For example, Hebb (1960) has said that the self has a developmental course that is influenced by learning. Jersild (1952) has said that "The self is acquired [and that] it develops as a person, with his inborn abilities and tendencies and all that is inherent in his makeup, meets up with the experiences of life [p. 16]." The direction of change is not likely to be the same for all students and changes in positive and negative directions are expected to balance out when self-concept scores for all students are combined. It is assumed, therefore, that:

Hypothesis VI There will be no significant difference in mean self-concept ratings obtained six months apart.

It seems probable that specific subgroups within the low-income culturally different population experience changes in self-concept which vary in magnitude and direction. Therefore, the above hypotheses are reexamined in order to ascertain significant changes in self-concept ratings that may have occurred during the six-month period.

Hypothesis VII There will be significant differences in self-concept ratings obtained six months apart among subgroups of children classified according to : (a) Race, (b) Sex, (c) Family Size, (d) Birth Order, (e) Grade Level.

Statement

It is recognized that this study has certain limitations; one of these is that only one area of the total self-concept is investigated--that self-concept manifested in a school setting and perceived by raters. Despite its limitations, however, the present study should add to our limited knowledge concerning the relationship of self-concept to specific variables in a low-income culturally different population, and it may provoke other investigators to reexamine those views which appear to be inconsistent with the present observations. That it may shed some light on the question which continually eludes us, e.g., "What distinguishes the disadvantaged child who succeeds in school from the one who does not?" is an underlying hope.

CHAPTER IV

PROCEDURE

Investigational procedures for the present study involved three stages: (a) the development of a self-concept (as inferred by judges) scale, (b) the obtaining of ratings based on the scale by teachers and counselors, and (c) determining the functional relationships that exist between self-concept and specific organismic and behavioral variables. Changes in the inferred self-concept scores after six months of schooling were also examined.

Description of Setting and Subjects

The population which provided the data for this study was composed of students, teachers, and counselors of 16 public elementary schools which have been declared eligible for, and are receiving, financial assistance under Title I of the 1965 Elementary and Secondary Education Act in Austin, Texas. The analysis of data was limited to that provided by all of the counselors (16) and 90 of the teachers in these 16 schools. The subjects, about whom the data were provided by these teachers and counselors, consisted of 180 children, 30 each in grades 1, 2, 3, 4, 5, and 6 in attendance at these schools.

The sample was composed of 90 girls and 90 boys who reside in school districts which have a high concentration of children from low-income families. These families have an annual income of less than $2,000, as reported by the 1960 Bureau of Census report, and at least 25 percent of the families living within this district earn similar incomes. Although a poverty income in 1967 is not the same as a poverty income in 1960 and many family incomes may have changed, the character of these neighborhoods, as defined in 1960, has not changed and the relative status of the families has remained fairly constant.

A random selection of teachers (90)--one from each grade in each of these 16 elementary schools was achieved; a boy and a girl were then selected randomly from each of the teacher's rooms in every school. Explicit, but simple, written instructions for achieving the stratified sampling were given to each of the 16 elementary school counselors. A copy of this instruction sheet is presented in the Appendix.

The Inferred Self-Concept Scale and Its Construction

A pool of items and traits was selected from literature related to self-concept and/or the measurement of it (Lipsett, 1958; Bower, 1958; Bills, et al., 1951; Rogers and Dymond, 1954; Phillips, 1966; Worchel, 1957; Sears and Sherman, 1964). Several items were reworded in order to make them more applicable to children and a few additional items were designed. A list composed of 100 items was presented to eight judges of varying professional backgrounds, all of which attest to expertise in assessing behavior of children: a school psychologist, a chief psychometrist for a public school system, the head counselor for a public school system, a child psychiatrist, a psychoanalyst, two educational psychologists, and an elementary school principal who possesses a doctorate in the field of education. These judges were asked to read the following instructions and then to check the appropriate items:

> Self-concept is defined by English and English as "a person's view of himself." Here, we are concerned with that concept of self generated by and in the school setting.
>
> A "Positive" self-concept is here assumed to be a person's view of himself as "competent" in a school setting and as "accepted" by classmates and adult school personnel within that setting.
>
> Please place a check mark in front of the item(s) that in your opinion would be useful to teachers, counselors and others in judging a student's self-concept.
>
> Place an additional check mark in front of any checked item that you think would be useful in evaluating this concept as based on a very limited amount of observation.

(A copy of this 100-item pool is presented in the Appendix).

Despite the differences in their theoretical backgrounds, 75 percent of these judges achieved consensus on 37 of the 100 items. Although different disciplines and schools of psychological, psychiatric and philosophic thought are reflected in these judgments, they apparently converge upon an understanding of self which is essentially the same, at least for the school situation. Seven items that appeared to the investigator to be repetitious were eliminated; the final scale, therefore, consisted of 30 items. A copy of the 30-item Inferred Self-Concept Scale is presented in the Appendix.

Each item has a five-point rating scale and all items are scored in an affirmative direction. Eight items (1, 2, 4, 18, 19, 20, 25, 29), which were selected randomly from the 30 items, were worded so that an item designates that a high concept of self is perceived by the rater when the item is given a "four" or a "five" rating and an item designates that a low student self-concept is perceived by the rater when it is given a one" or "two" rating. Twenty-two items were worded so that they had to be rated in the reverse direction. Thus, the perception of negative self-concept characteristics required the observer to rate items in an opposite direction from items assessing positive self-concept. This was an attempt to avoid, as much as possible, any response set on the part of the person who was rating self-concept. A copy of the scoring key (which makes the necessary adjustments for these differences in direction) is presented in the Appendix.

Other Instruments

Two standardized group tests with published manuals were used in this study as measures of behavioral variables. These particular instruments are routinely administered by teachers and/or psychometrists who are experienced in this procedure and their generally close adherence to the printed instructions and time limits produces test results which are comparable with the published norms. Scoring is objective and is accomplished by using keys which accompany the tests.

California Short-Form Test of Mental Maturity (1963)

This test is a well-know group test which, according to its authors (Sullivan, Clark, and Tiegs, 1963), provides information about

> . . . the functional capacities that are basic to learning, problem-solving, and responding to new situations. In addition to assessing the development of an individual or group with reference to national performance standards at each age level, the test results provide data as to the nature and potential of the abilities possessed by the examinee. At the primary level, assessment of mental maturity with the Short-Form provides evidence of a pupil's readiness to undertake various types of scholastic tasks and assists in the identification of individuals with special abilities or limitations who should receive special educational guidance [p. 3].

This 1963 Short-Form has been scaled at all levels to the *Stanford-Binet Intelligence Scale, 1960 Revision, Form L-M*, as the criterion instrument. At each level, the rate and scope of mental development are measured in terms of four statistically-derived factors:

Logical Reasoning (application of inductive or deductive reasoning),

Numerical Reasoning ("recognition" of quantitative concepts),

Verbal Concepts (comprehension of word meaning and application of it),

Memory (delayed recall).

Within these factors, the seven test-units are grouped into two sections, Language and Nonlanguage. A separate mental age and intelligence quotient is obtained for each of these sections. The scores also yield a total M.A. and I.Q. The Examiner's Manual fails to include any statistical evidence of reliability and validity. Buros (1965), however, reports that Kuder-Richardson Formula 21 equivalence coefficients were reported in a "Reliability Report" to be .90, .84, and .93 for Language, Nonlanguage, and Total Score, respectively, for grades 4, 5, and 6. It must be assumed that equivalence coefficients are similar at the other grade levels.

Metropolitan Achievement Tests (1959)

These tests are among the most widely used series of achievement tests for the elementary school level. In their 1959 revision, these tests include five batteries, from grades 1 to 9. Each battery is available in either three or four equivalent forms. Designed primarily as measures of power rather than speed, each battery requires from two to four and one-half hours distributed over four or five testing sessions.

Metropolitan Achievement Tests are organized in five levels, or batteries, as follows:

Primary I--for use in the latter half of Grade 1.

Primary II--for use in Grade 2.

Elementary--for use in Grades 3 and 4.

Intermediate--for use in Grades 5 and 6.

Advanced--for use in Grades 7, 8, and 9.

At each level, according to the general editor for these tests (Durest, 1959), the Metropolitan Achievement Tests include tests covering the most important knowledge or skill areas in the grade or grades for which that level is intended. Among the subject tests are: word knowledge, word discrimination, reading, spelling, arithmetic, language, language study skills, social studies information, social studies study skills and science. Various subtests yield comparable results so that the teacher may readily infer particular strengths and weaknesses of a pupil or class.

Raw scores on each test are usually converted into normalized standard scores with a mean of 50 and a standard deviation of 10. The normative samples, from which all these scores are derived, were modal-age grade groups chosen so as to be as nearly as possible a "representative" sample of the country's public school population. Durost states that the U.S. Office of Education, Census, and other data describing the national population were used to establish specifications for the normative group relative to certain characteristics (which included size of school system; geographical location; type of community, e.g., rural or urban; intelligence level of pupils; and type of system, e.g., segregated or nonsegregated). The minimum number of pupils desired per grade in the final norm group was also established, being set at a level well in excess of that necessary to yield national norms of high stability. Included in the 225 school systems which carried through the normative program were school systems from 49 states; the number of pupils tested in the standardization program was over 500,000. Split-half reliability coefficients for these tests were reported by Anastasi (1961) to be chiefly in the .80's and .90's, with the exception of the separate parts of the Language tests. Reliability coefficients for these parts, as reported by Durost, range from .78 to .84 for Usage; from .64 to .77 for Parts of Speech; from .80 to .88 for Punctuation and Capitalization; and from .76 to .85 for Language Study Skill. Social Studies Study Skills tests also obtained lower reliability coefficients--ranging from .64 to .77. According to Anastasi, content validity is based chiefly on "curricular research" involving systematic analysis of syllabi, textbooks, and published statements of educational goals, from which the test specifications were prepared. She states that further validation utilized item analyses conducted in large-scale tryouts of the experimental forms and that, in the development of the final forms, items were selected in terms of difficulty, discriminative value against subtest scores, and grade differentiation.

Administration of Tests and Gathering of Data

The teacher of each child involved in the study and the counselor at the school where the child was a student were asked to rate, independently, these children on the adjusted 30-item, five-point self-concept scale in order to make interjudge comparison possible and to obtain initial self-concept scores. This procedure was repeated six months later in order to achieve an estimate of any change that might have occurred in the student's self-concept (as inferred by these judges) during this period of schooling. The two other instruments which were used in this investigation are routinely administered in the Austin Public Schools; therefore, it was possible to obtain intelligence and achievement scores for most of the 180 children in the sample from personal cumulative folders which are maintained for each child at the school where he is in attendance. The personal data necessary for classifying the children according to specified organismic variables were also obtained from the individual cumulative folders at each school. Each school counselor gave special administrations of the

California Short-Form Test of Mental Maturity (1963) to first grade children who were a part of this sample since this particular test is not generally administered in the Austin Independent School District until the second grade. (These administrations included other children who had missed earlier administrations; thus, the group administration procedure was retained.)

Methods of Analyses

Correlational procedures were used to evaluate examiner reliability, test reliability, and the test-retest reliability of the Inferred Self-Concept Scale. Correlational procedures were also used to examine its validity. In addition, the technique of image analysis was employed to determine factor loadings of items in the scale and to further examine its validity.

Analyses of variance, analyses of covariance, correlational procedures, and image analyses were used to evaluate hypotheses. Specifically: (1) Analysis of variance was used to compare mean self-concept scores of the various subgroups (Anglos, Mexican-Americans, and Negroes; males and females; children from large and from small families; oldest and non-oldest children; and first, second, third, fourth, fifth, and sixth grade students) as required by an examination of Hypotheses I, II, III, VI, and VII. Analysis of covariance was used where it was considered to be appropriate. Interaction effects were examined. F-tests were applied to ascertain if there were significant differences in variance among group means and t-tests were applied to ascertain if there were significant differences between means. (2) Correlational procedures were used in validating Hypotheses IV(a), IV(b), V(a), and V(b) in order to examine the relationship of self-concept and specified organismic and behavioral variables. Values of _r_ that met the requirements of significance at the .05 and .01 levels of significance were considered. (3) Image analysis was employed in an attempt to clarify significant differences between groups.

CHAPTER III

RESULTS

Since an instrument was developed specifically to be used in this investigation, the results of statistical analyses made of its reliability and validity are presented first. Hypotheses are then evaluated. These analyses were completed on The University of Texas CDC 6600 computer using basic statistical programs developed by Veldman (1966) and Poynor (1966). Special programs designed by Cunningham (1967) were also employed. In general, "significance" of results is assumed to be established when the obtained results would have occurred fewer than five times out of 100 through chance factors alone--at the .05 level of significance. Results which would have occurred fewer than one time out of 100--at the .-1 level of significance--are also noted.

Evaluation of Inferred Self-Concept Scale

Reliability

1. Examiner Reliability. A substantial amount of agreement between examiners was found to be present. This reliability was determined in several ways:

(a) A Pearson product-moment correlation coefficient was obtained, by using Veldman's Program MAXCOR, in order to determine the relationship between the counselors' for the "total scale" scores for the 180 students in the sample and the teachers' "total scale" scores for these same students. A positive coefficient of .5801 was obtained; this coefficient is significant at the .01 level.

(b) A Pearson product-moment correlation coefficient was obtained by using a special program developed by Cunningham, in order to determine the relationship between a counselor's 30 "ratings for each student" and a teacher's 30 "ratings for each student." (It was possible to rate each item as 1, 2, 3, 4, or 5.) The correlations between counselor and teacher 30-item ratings ranged from -.55 to .94 for the 180 students, with one negative correlation (-.55) being significant at the .01 level. No other negative correlation coefficient achieved significance. No logical explanation for the one significant negative correlation is apparent. The possibility exists that one of the judges could have reversed the scale for one student. Fifty percent of the correlations between counselor and teacher 30-item ratings for the 180 students were significant in a positive direction, at the .05 level. The distribution of these coefficients is presented in Table 1 [see following page].

(c) A Pearson product-moment correlation coefficient was obtained between the counselors' 180 "ratings for each item" and the teachers' 180 "ratings for each item" for the 30 items in the total scale by using Veldman's Program MAXCOR. The coefficients for every item except item #3 indicated that their ratings on 29 of the 30 items were significantly related at or beyond the .05 level in a positive direction. These correlation coefficients, which would have been obtained fewer than five times out of 100 by chance, are shown in Table 2.

(d) Examiner variance was examined by using Veldman's Program TESTAT to determine mean scores (and

TABLE 1

EXAMINER RELIABILITY

Distribution of Correlations Between Counselor Total Scale Score and Teacher Total Scale Score for Each Student

Correlation Coefficients	f	Percent
.91 through 1.00	2	1
.81 through .90	4	2
.71 through .80	12	7
.61 through .70	12	7
.51 through .60	12	7
.41 through .50	26	14
.31 through .40[a]	33	18
.21 through .30	25	14
.11 through .20	25	14
.01 through .10	10	6
.00 through -.09	8	4
-.10 through -.19	5	3
-.20 through -.29	3	1
-.30 through -.39[b]	2	1
-.40 through -.49	0	0
-.50 through -.59	1	1
	180	100

Note.-Correlations were obtained by pairing the 30 item ratings for each of the 180 total scores.

$r_{.05} = .361$

$r_{.01} = .463$

[a] Fourteen correlation coefficients (12 percent) were obtained for the interval .36 through .40.

[b] No correlation coefficients were obtained for the interval -.36 through -.40.

TABLE 2

EXAMINER RELIABILITY

Correlation between Counselor Ratings for Each Item and Teacher Ratings for Each Item

Items	r_{c-t}
1. Enjoys working with others	.36
2. Exhibits self confidence	.39
3. Plays with smaller or younger children	.07
4. Evidences strong pleasure in good work	.47
5. Is antagonistic to adults	.30
6. Has unrealistic expectations for himself	.21
7. Is easily discouraged	.35
8. Appears unsociable	.30
9. Cries easily	.33
10. Is unfriendly to classmates	.46
11. Tries to dominate or bully	.52
12. Fights	.44
13. Talks compulsively	.28
14. Seems afraid of teacher	.18
15. Feels he is "picked on" by classmates	.28
16. Gives up easily	.29
17. Is defiant	.28
18. Thinks he is right	.22
19. Is ready to accept blame when at fault	.29
20. Is trusting	.43
21. Seems to have a "chip" on his shoulder	.58
22. Is quarrelsome or argumentative	.44
23. Is over-sensitive	.37
24. Provokes hostility from classmates	.39
25. Thinks his teacher likes him	.16
26. Tattles	.33
27. Is withdrawing	.45
28. Is fearful	.16
29. Seems satisfied with level of performance	.27
30. Appears worried	.30

Note.-All correlations except for items 3, 14, 25, and 28 are significant beyond the .01 level. All correlations except for item 3 are significant beyond the .05 level.

$r_{.05} = .147$

$r_{.01} = .193$

standard deviations for the Inferred Self-Concept Scale. The mean score for Counselors was found to be 114.94, with a standard deviation of 14.06; the mean score for Teachers was found to be 118.56, with a standard deviation of 14.95. An examination of the difference between these mean scores was accomplished by using Veldman's Program ANOVAR for subjects by trial analysis of variance, which is equivalent to the _t_-test for correlated observation. It was determined that, in general, teacher ratings on the Inferred Self-Concept Scale were significantly higher than counselor ratings. This information is presented in Table 3.

2. _Test Reliability_. Internal Consistency of the scale was examined in two ways:

(a) _Split-Half Reliability_. A special program developed by Cunningham for the CDC 6600 computer was used to obtain split-half reliability coefficients between the sum of the 15 even-numbered items and the sum of the 15 odd-numbered items for: (1) Counselors, (2) Teachers, and for (3) Counselors-Teachers, combined. (The number of scores which were paired in order to obtain each correlation was 180.) The obtained Pearson product-moment correlation

TABLE 3

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR EXAMINERS SCORES FOR 180 STUDENTS

	Counselors	Teachers
N:	180	180
M:	114.94	118.56
SD:	14.06	14.95

Source	df	MS	F	P
Between Groups	1	1177.23	13.20	.001
Within Groups	358	423.74		
Total	359	214.56		

coefficients were, respectively .8614, .8567, and .9026. All of these coefficients are significant beyond the .01 level; they would indicate that this instrument is internally consistent and that items do appear to achieve a satisfactory degree of homogeneity.

(b) Interitem Consistency. The homogeneity of items on this scale was also determined by examining the consistency of performance on all items through use of Veldman's Program TESTAT, which utilizes a generalization of the Kuder-Richardson formula #20 for dichotomous items:

$$\alpha = \frac{K}{K-1}\left[\frac{\sigma_T{}^2 - \sum^{K} \sigma_I{}^2}{\sigma_T^2}\right]$$

where K = the number of items in the scale
I = item
T = total

Correlations between item-score and total-scale-score for Counselors and for Teachers may be found in Table 4. (The number of scores which were paired in order to obtain each correlation coefficient was 180.) The alpha coefficient for Counselors was determined to be .9204. The alpha coefficient for Teachers was determined to be .9072; both

TABLE 4

INTERITEM CONSISTENCY TEST RELIABILITY

Correlations Between Item Score and Total Scale Score for Counselors and Teachers

Item Number	Counselors	Teachers
	$r_{\text{Item-Total}}$	$r_{\text{Item-Total}}$
1	.53	.56
2	.59	.52
3	.06	.01
4	.58	.55
5	.57	.72
6	.42	.28
7	.67	.56
8	.56	.51
9	.48	.49
10	.61	.70
11	.61	.60
12	.57	.69
13	.42	.37
14	.43	.53
15	.62	.69
16	.64	.60
17	.67	.62
18	.39	.11
19	.61	.59
20	.70	.67
21	.78	.77
22	.66	.71
23	.68	.67
24	.69	.63
25	.61	.46
26	.50	.51
27	.44	.38
28	.44	.50
29	.33	.11
30	.59	.55

Note.-All correlations except those underlined are significant beyond the .01 level.

$r_{.05} = .147$

$r_{.01} = .193$

coefficients reflect the high degree of reliability among the items of the scale, in terms of overlapping variance.

3. Test-Retest Reliability. Although it was assumed that changes would occur in the self-concept of individual students during the six months period between assessments, it was decided that the test should essentially be measuring the same thing and that correlations between pre-tests and post-tests should be relatively high. A program developed for the CDC 6600 by Poynor (Program CORID) was used in order to obtain Pearson product-moment correlation coefficients which would generate this information. The coefficients which were obtained for the students classified according to race, sex, birth order, family size, grade level, and for the total sample are all significant beyond the .01 level. These findings suggest that the same attribute has been measured and that the students have changed very little in status within the sample on the variable measured. These results are presented in Table 5.

TABLE 5

CORRELATIONS BETWEEN OCTOBER SELF-CONCEPT SCORES AND APRIL SELF-CONCEPT SCORES

Variable	N	r
Race		
Anglo	13	.87*
Latin	86	.67*
Negro	81	.62*
Sex		
Male	90	.71*
Female	90	.58*
Family Size		
Large Family, 5 or more	95	.60*
Small Family, 4 or fewer	85	.75*
Birth Order		
Oldest Child	44	.82*
Non-Oldest Child	136	.60*
Grade		
1st Grade	30	.84*
2nd Grade	30	.70*
3rd Grade	30	.73*
4th Grade	30	.56*
5th Grade	30	.70*
6th Grade	30	.49*
Total Sample		
All Groups Combined	180	.66*

*$p < .01$

Validity

The following analyses were conducted in the attempt to determine whether the Inferred Self-Concept Scale measures what it is supposed to measure:

1. Content Validity. The item selection procedure discussed in Chapter II was reexamined. This procedure is recognized as an example of content validation since the judges who checked the items that they considered to be useful for assessing self-concept as inferred by others were functioning in the same way as educators who may be asked to evaluate items for an achievement test.

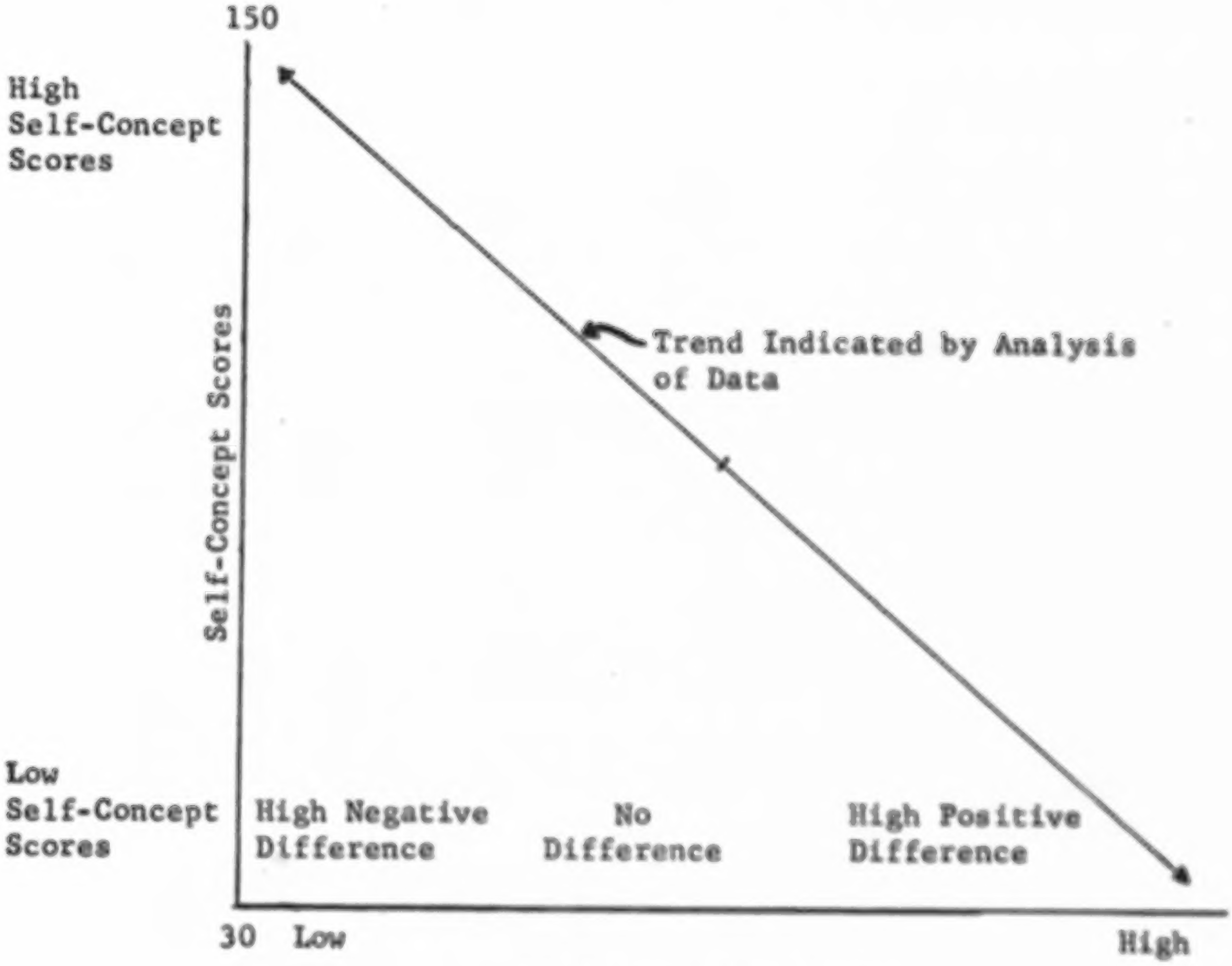
2. Criterion-related Validity. This scale was designed for assessment of that concept of self which raters perceive to be manifested by students in a school setting. If this concept is correctly assessed by the scale, then it is presumed that the degree to which the student possesses a positive or negative self-concept will be reflected in the assessment. If the importance of acquiring a sense of competency for developing a positive self-concept (as suggested by many writers, i.e., Passow, 1963; Deutsch, 1963, Clark, 1963; Erikson, 1951; Sears and

Sherman, 1964, and by others) is a truism, self-concept should be positively related to competency and scores obtained on this scale should be positively related to competency as a criterion.

The competency criterion which was used in this investigation was the "competency-index." The computational process utilized as its minuend the level of achievement, as defined by a Metropolitan Achievement Test standard T-score for each student. The subtrahend consisted of the level of intelligence, as defined by a California Test of Mental Maturity standard T-score for each student.

Scores obtained on the Inferred Self-Concept Scale by children in the sample were accordingly analyzed, using Veldman's Program TESTAT to compute T-scores and Poynor's Program CORID to compute the competency-index. Poynor's Program CORID was then used to obtain Pearson product-moment correlation coefficients between self-concept scores and the competency-index scores. The reasoning behind this procedure was that the "underachiever," the child with relatively high intelligence scores and low achievement scores, would be aware of his lack of competency and would manifest a low self-concept, although no causal relationship was implied. Results appear to refute this assumption. Negative correlations were obtained for every grouping of students, as well as for the entire sample, between self-concept and competency-index scores. These negative correlations were significant at the .01 level. It should be noted that competency-index scores range from "low" (a high-negative difference score accomplished by subtracting a high intelligence score from a low achievement score) to "high" (a high-positive difference score accomplished by subtracting a low intelligence score from a high achievement score). These relationships are depicted in Figure 1 and the obtained correlation coefficients are presented in Table 6, along with correlation coefficients showing the relationship of self-concept to achievement and to intelligence. A comparison of these coefficients shows how self-concepts of the different groups and these particular variables vary together and indicates the strengths and directions of these associations.

Results suggest that the intelligent child who has a high self-concept either does not feel a need to achieve or is not adversely affected by the lack of achievement.



Competency Index Scores

(Achievement T-Score Minus Intelligence T-Score)

Figure 1

The Relationship of Self-Concept to Competency

TABLE 6

CORRELATION BETWEEN SELF CONCEPT AND ACHIEVEMENT, INTELLIGENCE, AND A COMPETENCY INDEX

	N	SC-ACH	SC-INTELL	SC-COMPETENCY INDEX
Race				
Anglo	13	.31	.52	-.39
Latin	86	-.05	.18	-.18
Negro	81	.01	.31	-.21
Sex				
Male	90	.03	.30**	-.21*
Female	90	.03	.31**	-.23*
Family Size				
Large Family, 5 or more	95	-.08	.23*	-.22*
Small Family, 4 or fewer	85	.11	.39**	-.24*
Birth Order				
Oldest Child	44	-.03	.42	-.35*
Non-Oldest Child	134	.05	.28	-.17*
Only Child[a]				
Grade				
1st Grade	30	.09	.17	.00
2nd Grade	30	.09	.20	-.12
3rd Grade	30	.36	.23	-.09
4th Grade	30	.36	.28	-.03
5th Grade	30	-.08	.61**	-.57**
6th Grade	30	.18	.37	-.27
Total Sample				
All Groups Combined	180	.18*	.31**	-.25**

Note.-Achievement scores were obtained on the Metropolitan Achievement Tests. Intelligence scores were obtained on California Tests of Mental Maturity. Self-Concept scores were obtained on the Inferred Self-Concept Scale. The competency index is the result of subtracting a standard intelligence score from a standard achievement score.

[a] There were two children in the "only" classification.

*p <.05

**p <.01

The intelligent child with the low self-concept , conversely, does feel a greater need to achieve and perhaps "conform" to expectations. Although no cause-effect relationship had been suggested, these findings may tend to indicate that self-concept is antecedent to academic achievement at school, since it is unlikely that high achievement in school would lead to low self-concept. Instead, it is possible that a high concept of self might enable the student to subjectively devalue academic achievement if it did not seem valuable to him. Perhaps the brighter child with the high self-concept, although more aware of the discrepancy between his capability and his achievement, is not concerned by it if he is able to realistically assess the situation in terms of his own situation and decide that academic achievement is not of importance. It has previously been found by Davis (1948) that "anxiety" in regard to the attainment of internalized needs for vocational prestige does not drive lower-class children to excel because even if they equal middle-class children in many respects, academic achievement is still "quite a valueless reward for a child who soon comes to realize that professional status is beyond his grasp.

It appears that the children who achieve the most, relative to their intelligence, are those who exhibit low self-concept scores! It appears that "competency," itself, may not be the motivational force that is of importance--it may be necessary to somehow instill in these children the "desire to feel competent" in specific areas considered to be of importance in our democratic society. If, indeed, high self-concept is negatively related to achievement for the low-income culturally different bright child, then educators must reexamine "achievement" that is deemed desirable and necessary by them and relate it to the culture of this population so that the individual students, themselves, will consider such achievement desirable and necessary.

3. Construct Validity. The American Psychological Association's Standards for Educational and Psychological Tests and Manuals (1966) lists several procedures for investigating this type of validity. Among these is the correlating of a new test with other tests--expecting the new test to correlate more highly with another test measuring the same construct than with other types of tests. Unfortunately, although dozens of tests related to self-concept have been developed, there is little basis for comparison.

Different investigators have attempted to assess perceptions: of the ideal self, of the ordinary self, of the differences between these, of the inferred self and of others, of the acceptance of self, of changes in self-reference during successful counseling, of the ideal self and social adjustment, of the immature versus the realistic self-concept and body image, of the self-concept and body size, of changes in the self-concept, and more. None attempt to measure that concept of self which is perceived by others as being manifested in a school setting. The technique of correlations-between-tests for assessing construct validity is, therefore, considered inappropriate for this scale. Too, age differentiations are impossible to determine since there is no reason to suspect that the self-concept generally increases, or decreases, with age. Nor is it possible in this particular situation, where no schools can be used as controls, to examine the effect of selected variables experimentally.

Since this study does attempt to interpret the inferred self-concept test as a measure of a theoretical variable, the proposed interpretation will be restated fully, in accordance with A.P.A. (1966) recommendations, so that this interpretation of the theoretical construct can be distinguished from other interpretations arising under various theories. The following statements are taken from the instructions given to the eight judges who helped choose items for this scale by checking appropriate items from a battery composed of 100 items:

> Self-concept is defined by English and English as "a person's view of himself." Here, we are concerned with that concept of self generated by and in the school setting.
>
> A "positive" self-concept is here assumed to be a person's view of himself as "competent" in a school setting and as "accepted" by classmates and adult school personnel within that setting.

In this investigation, we are concerned with an internal construct (self-concept) which is reflected by behavior (manifested self-concept); and we are not able to identify any single criterion that is universally acceptable as a measure against which to validate the Inferred Self-Concept Scale. Both the structure of the scale and our use of it are based on the theoretical assumption that people, including school children, have developed their self-concepts as a result of various antecedent factors. In turn, the self-concept influences their behavior. The validation involved, therefore, has been directed at obtaining evidence which will either support the assumption of construct validity, or evidence which will not support this assumption.

In order to examine this evidence, self-concept scores were correlated with many of the variables by which children may be classified. It was found that the "type of student" a child is (as represented by the averaging of his semester grades into above-average, average, or below-average designations) correlated significantly at the .01 level with self-concept. In addition, his being below-age in grade (as opposed to his being of average-age in grade or above-age in grade), correlated significantly with self-concept at the .05 level. Behavioral variables which correlated significantly at the .01 level with self-concept scores included: Language I.Q., Nonlanguage I.Q., and Total I.Q. Arithmetic Achievement and Total Achievement correlated significantly at the .05 level. We would, subjectively, expect self-concept to correlate significantly with these variables and it does. Therefore, the evidence seems to indicate that the assumption of construct validity is upheld. These findings are presented in Table 7.

TABLE 7

CORRELATIONS OF SELF-CONCEPT AND SPECIFIC VARIABLES

	N	r
Organismic Variable		
Grade Level, 1 through 6	180	.05
Age in Months	180	-.09
Family Size	180	-.07
Below Average Student to Above Average Student	180	.22**
Above Age in Grade to Below Average in Grade	180	.16*
Behavioral Variables		
Language I.Q.	180	.32**
Non Language I.Q.	180	.25**
Total I.Q.	180	.31**
Grade 1, Readiness[a]	30	.09
Grades 2-6 Reading Achievement, Score	150	.19*
Grades 2-6 Arithmetic Achievement, Score	150	.20*
Grades 2-6 Total Achievement	180	.18*

[a] First grade students do not have reading achievement scores nor arithmetic achievement scores; readiness scores are treated as total achievement.

*p $<.05$

**p $<.01$

Image Analysis

In a further attempt to determine the validity of the Inferred Self-Concept Scale, Veldman's Program FACTOR was used to conduct an item analysis. This method reorganizes the items and reduces them to essentials by means of criteria internal to the analytic system. A correlation matrix of the items was obtained. This was then converted to its G covariance matrix before a principal-components analysis, and a Varimax rotation analysis, using a minimum eigen value of 1.00, were carried out. Items with factor loadings of .30 or higher in the Varimax rotation analysis were examined and it was found that two factors accounted for 65.50 percent of the total common variance. Items representing the two most significant factors found in image analyses of the Inferred Self-Concept Scale and their factor loadings are reported in Table 8. An examination of the items which loaded high on these factors revealed that Factor A appeared to reflect the individual's maturity in interpersonal relationships, or his "self-conformance." Factor B, on the other hand, seemed to reflect attitude, as opposed to behaving, and the items which loaded high on this factor appeared to have more to do with "self-attitude."

TABLE 8

FACTOR LOADINGS OBTAINED FOR INFERRED SELF-CONCEPT ITEMS

Factor	Item Number	Item	Factor Loading
A	5	Is antagonistic to adults (Rs)	.77
	10	Is unfriendly to classmates (Rs)	.66
	11	Tries to dominate or bully (Rs)	.81
	12	Fights (Rs)	.77
	13	Talks compulsively (Rs)	.52
	15	Feels he is "picked on" by classmates (Rs)	.59
	17	Is defiant (Rs)	.73
	19	Is ready to accept blame when at fault	.72
	20	Is trusting	.63
	21	Seems to have a chip on his shoulder (Rs)	.80
	22	Is quarrelsome or argumentative (Rs)	.82
	24	Provokes hostility from classmates (Rs)	.77
	26	Tattles (Rs)	.60
B	2	Exhibits self-confidence	.76
	4	Evidences strong pleasure in good work	.50
	7	Is easily discouraged (Rs)	.72
	8	Appears unsociable (Rs)	.47
	14	Seems afraid of teacher (Is)	.59
	16	Gives up easily (Rs)	.65
	18	Thinks he is right	.40
	23	Is "over-sensitive" (Rs)	.65
	27	Is withdrawing (Rs)	.73
	28	Is fearful (Rs)	.73
	30	Appears worried (Rs)	.69

Note.-Items marked with an Rs were scored in the reverse direction.

In a further examination of these two factors, it was decided to determine whether differences in their scores on these factors existed between groups in our sample. Analysis of variance techniques revealed no significant differences in Factor A between races, between sexes, between family sizes, between birth order, nor between different grade levels. On the other hand, a significant difference in Factor B was found between Anglos and Mexican-Americans; between Mexican-Americans and Negroes; between large and small families; and also between grades 1 and 2, combined, and grades 3 and 4, combined. No significant difference in Factor B was found to exist between Anglos and Negroes; between males and females; between oldest and non-oldest children; between grades 1 and 2, combined, and grades 5 and 6 combined; nor between grades 3 and 4, combined, and grades 5 and 6, combined. These results are presented in Tables 9 through 14.

Examination of Hypotheses

The statistical analyses related to the proposed hypotheses were completed on The University of Texas CDC 6600 computer, using basic statistical programs developed by Poynor (1966) and Veldman (1966). Self-concept scores,

TABLE 9

SUMMARY DATA AND ANALYSIS OF VARIANCE OF FACTOR B FOR RACE FOR GRADES 1 THROUGH 6, COMBINED

	Anglo	Mexican-American	Negro
N:	13	86	81
M:	.42	-.30	.25

Source	df	MS	F	P
Between Groups	2	7.52	8.07	.001
Within Groups	177	.93		
Total	179	1.01		

TABLE 10

SUMMARY DATA AND ANALYSIS OF VARIANCE OF FACTOR B FOR GRADES 1 THROUGH 6, COMBINED

	Anglos	Mexican-Americans
N:	13	86
M:	.42	-.30

Source	df	MS	F	P
Between Groups	1	5.86	5.10	.02
Within Groups	97	1.15		
Total	98	1.20		

TABLE 11

SUMMARY DATA AND ANALYSIS OF VARIANCE OF FACTOR B FOR MEXICAN-AMERICANS AND NEGROES FOR GRADES 1 THROUGH 6, COMBINED

	Mexican-Americans	Negroes
N:	86	81
M:	-.30	.25

Source	df	MS	F	P
Between Groups	1	12.55	13.22	.001
Within Groups	165	.95		
Total	166	1.02		

TABLE 12

SUMMARY DATA AND ANALYSIS OF VARIANCE OF FACTOR B FOR FAMILY SIZES FOR GRADES 1 THROUGH 6, COMBINED

	Large	Small
N:	95	85
M:	-.16	.18

Source	df	MS	F	P
Between Groups	1	5.00	5.09	.02
Within Groups	178	.98		
Total	179	1.01		

TABLE 13

SUMMARY DATA AND ANALYSIS OF VARIANCE OF FACTOR B FOR GRADE LEVEL FOR ALL GROUPS COMBINED

	1st	2nd	3rd	4th	5th	6th
N:	30	30	30	30	30	30
M:	-.07	.48	-.37	-.08	-.01	.04

Source	df	MS	F	P
Between Groups	5	2.26	2.23	.04
Within Groups	174	.97		
Total	179	1.01		

TABLE 14

SUMMARY DATA AND ANALYSIS OF VARIANCE OF FACTOR B FOR GRADES 1 AND 2, COMBINED AND GRADES 3 AND 4, COMBINED

	Grades 1 and 2	Grades 3 and 4
N:	60	60
M:	.20	-.22

Source	df	MS	F	P
Between Groups	1	5.46	5.31	.02
Within Groups	118	1.03		
Total	119	1.07		

which were a portion of the data analyzed, were self-concept scores obtained for students from teacher ratings. Although counselor scores were obtained and used, with teacher scores, for determining the interjudge reliability of the Inferred Self-Concept Scale, they were not used in the analyses of hypotheses. The decision to use teacher scores was based on the fact that teachers are always present in the school setting, whereas counselors are not; future comparisons and replication studies would, therefore, be more feasible and accurate if the same classification of rater could be used.

Prior to examining the hypotheses, a descriptive analysis of the data was accomplished. The means of scores obtained by students in the various groups on the Metropolitan Achievement Tests, on the California Test of Mental Maturity, and also on both ratings of the Inferred Self-Concept Scale, are shown in Tables 15(a), (b), and (c). Scores obtained on the Metropolitan Achievement Test ranged from 22 to 60, with a mean of 37.28; scores obtained on the California Test of Mental Maturity ranged from 60 to 124, the mean being 91.3. The scores obtained on the Inferred Self-Concept Scale ranged from 82 to 145 on the October rating, the mean being 118.56; and from 70 to 145, with a mean of 116.18 on the April ratings.

TABLE 15

a) MEANS OF SCORES ON INFERRED SELF-CONCEPT SCALE OBTAINED NEAR BEGINNING AND END OF SCHOOL YEAR

Variable	N	October	April
Race			
Anglo	13	127.6	122.92
Mexican-American	86	116.0	115.92
Negro	81	119.7	115.37
Sex			
Female	90	119.8	117.88
Male	90	117.3	114.48
Family Size			
Small Family, 4 or fewer	85	119.8	115.29
Large Family, 5 or more	95	117.3	116.97
Birth Order			
Oldest Child	44	119.4	114.43
Non-Oldest Child	136	118.1	116.74
Grade			
1st Grade	30	113.6	114.10
2nd Grade	30	124.80	117.13
3rd Grade	30	116.17	112.40
4th Grade	30	117.06	114.83
5th Grade	30	120.93	117.50
6th Grade	30	118.80	120.60
Total Sample			
All Groups Combined	180	118.56	116.18

TABLE 15

b) MEANS OF SCORES ON METROPOLITAN ACHIEVEMENT TESTS (READING, ARITHMETIC, AND TOTAL)

Variable	N	MAT Read	MAT Arith	MAT Total
Race				
Anglo (No 1st graders)	13	43.23	40.62	41.77
Mexican-Americans (14 1st graders)	86	36.37	30.51	37.50
Negro (16 1st graders)	81	38.10	28.73	40.65
Sex				
Female (15 1st graders)	90	38.37	30.59	38.53
Male (15 1st graders)	90	36.62	30.36	39.78
Family Size				
Small Family, 4 or fewer (11 1st graders)	85	39.81	33.39	41.58
Large Family, 5 or more (19 1st graders)	95	35.37	27.81	36.94
Birth Order				
Oldest Child (5 1st graders)	44	38.84	32.51	37.73
Non-Oldest Child (25 1st graders)	136	37.02	29.71	39.68
Grade				
1st Grade	30	---	---	48.97
2nd Grade	30	33.57	36.47	34.70
3rd Grade	30	36.73	29.83	33.07
4th Grade	30	43.07	40.20	41.33
5th Grade	30	39.60	36.43	36.20
6th Grade	30	42.90	39.87	41.10
Total Sample				
All Groups Combined (30 1st graders)	180	39.18	36.56	37.28

Note.-First grade students do not have reading achievement scores nor arithmetic achievement scores; readiness scores are treated as total achievement scores. First grade children are subtracted from the N indicated for mean reading and arithmetic achievement scores.

TABLE 15

c) MEANS OF SCORES ON CALIFORNIA MENTAL MATURITY TESTS (LANGUAGE, NON-LANGUAGE, AND TOTAL)

Variable	N	CTMM L	CTMM NL	CTMM Total
Race				
Anglo	13	105.46	104.85	106.08
Mexican-American	86	84.94	92.47	87.76
Negro	81	92.44	94.59	92.72
Sex				
Male	90	90.04	94.36	91.33
Female	90	89.42	94.39	91.27
Family Size				
Small Family, 4 or fewer	85	91.21	94.35	92.45
Large Family, 5 or more	95	88.38	94.39	90.24
Brith Order				
Oldest Child	44	91.20	94.07	92.76
Non-Oldest Child	136	89.29	94.38	90.77
Grade				
1st Grade	30	91.30	95.57	92.27
2nd Grade	30	86.73	96.03	90.43
3rd Grade	30	82.43	91.13	86.50
4th Grade	30	88.33	91.97	88.77
5th Grade	30	94.37	95.80	94.73
6th Grade	30	95.63	95.40	95.17
Total Sample				
All Groups Combined	180	89.80	94.32	91.31

The distribution of scores for the sample as a whole was examined by using Veldman's Program DISTAT and it was found to be significantly skewed in a negative direction for the October ratings and, also, for the April ratings (p.<.01).

Scores were then analyzed, using appropriate computer programs, which will be identified, to examine the proposed hypotheses.

Hypothesis I There will be significant differences in mean self-concept scores for children classified according to Race: Anglo, Mexican-American, Negro; Sex: Male, Female; Family Size: Large-sized (five or more children) Family, Small-sized (four or fewer children) Family; Birth Order: Oldest Children, Non-oldest Children; Grade Level: Grades 1, 2, 3, 4, 5, 6.

To test this hypothesis, self-concept scores obtained by the various classifications of children were analyzed, using Veldman's Program ANOVAR for single classification analysis of variance in order to examine the differences between group mean scores. (With two groups of subjects, this program is equivalent to a t-test for independent groups.) The obtained F's indicate that the only significant difference between means for these groups is that between races, with Anglos having a self-concept higher and significantly different from Mexican-Americans, but not significantly different from Negroes, although the latter difference approaches significance ($p. < .07$). Mexican-Americans and Negroes did not differ significantly. These results are presented in Tables 16-22. There was no significant difference between the mean self-concept scores obtained by oldest and non-oldest children. The effect of birth order on self-concept, however, was examined further in order to determine whether there is a significant difference between the self-concepts of the male oldest child, the female oldest child, the oldest boy, and the oldest girl in the family. The obtained F indicates that there is no significant difference between these children in their self-concept ratings. Table 23 shows this finding.

Mean self-concept scores for the six different grade levels were analyzed and it was found that a difference exists between grade levels which is very close to being significant ($p. < .06$). The mean self-concept score for

TABLE 16

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR RACE FOR GRADES 1 THROUGH 6, COMBINED

	Anglo	Mexican-Americans	Negro
N:	13	86	81
M:	127.62	116.04	119.78
SD:	14.86	14.85	14.36

Source	df	MS	F	P
Between Groups	2	864.72	3.97	.02
Within Groups	177	217.80		
Total	179	225.03		

TABLE 17

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR ANGLOS AND MEXICAN-AMERICANS FOR GRADES 1 THROUGH 6, COMBINED

	Anglos	Mexican-Americans
N:	13	86
M:	127.62	116.05

Source	df	MS	F	P
Between Groups	1	1511.43	6.71	.01
Within Groups	97	225.12		
Total	98	238.25		

TABLE 18

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR ANGLOS AND NEGROES FOR GRADES 1 THROUGH 6, COMBINED

	Anglos	Negroes
N:	13	81
M:	127.62	119.78

Source	df	MS	F	P
Between Groups	1	688.13	3.23	.07
Within Groups	92	212.86		
Total	93	217.97		

TABLE 19

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR MEXICAN-AMERICANS AND NEGROES FOR GRADES 1 THROUGH 6, COMBINED

	Mexican-Americans	Negroes
N:	86	81
M:	116.05	119.78

Source	df	MS	F	P
Between Groups	1	580.74	2.69	.10
Within Groups	165	216.25		
Total	166	218.44		

TABLE 20

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR SEX FOR GRADES 1 THROUGH 6, COMBINED

	Female	Male
N:	90	90
M:	119.80	117.32
SD:	14.80	15.01

Source	df	MS	F	P
Between Groups	1	276.27	1.23	.27
Within Groups	178	224.74		
Total	179	225.03		

TABLE 21

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR FAMILY SIZE FOR GRADES 1 THROUGH 6, COMBINED

	Large	Small
N:	95	85
M:	117.37	119.89

Source	df	MS	F	P
Between Groups	1	286.18	1.27	.26
Within Groups	178	224.68		
Total	179	225.03		

Note.-Large size family has five or more children; small size family has four or fewer children.

TABLE 22

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR BIRTH ORDER FOR GRADES 1 THROUGH 6, COMBINED

	Oldest Child	Non-Oldest Child
N:	44	136
M:	119.64	118.21

Source	df	MS	F	P
Between Groups	1	67.33	.30	.59
Within Groups	178	226.92		
Total	179	225.03		

TABLE 23

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR MALE OLDEST CHILD, FEMALE OLDEST CHILD, OLDEST BOY, OLDEST GIRL FOR GRADES 1 THROUGH 6, COMBINED

	Male Oldest Child	Female Oldest Child	Oldest Boy	Oldest Girl
N:	21	23	20	16
M:	115.62	123.30	119.55	121.31

Source	df	MS	F	D
Between Groups	3	228.53	.98	.59
Within Groups	76	233.06		
Total	79	232.88		

the second grade was higher than for any other grade. Further analyses using the modified _t_-test formula

$$\frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\text{MS within} \times \frac{1}{N_1 + N_2}}}$$

suggest that a significant difference exists between second grade self-concept scores as compared with first, third, fourth, fifth, and sixth grade self-concept scores. Using the same formula, it was determined that self-concept scores obtained by the children in grade one were significantly lower than those obtained by children in grades 2, 5, and 6. Table 24 presents results of the analysis for grade level.

An examination for the effect of interaction between grade level and these organismic variables was accomplished, using Veldman's Program AVAR23, which accomplishes a two-way analysis of variance. This analysis revealed that there was no significant interaction between grade level and race. The obtained _F_'s, however, indicate that there is a significant interaction effect between grade level and family size. There is also a significant main effect and interaction effect between grade level and birth order. These results may be found in Tables 25-27.

TABLE 24

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR GRADE LEVEL FOR ALL GROUPS COMBINED

	1st	2nd	3rd	4th	5th	6th
N:	30	30	30	30	30	30
M:	113.60	124.80	116.17	117.07	120.93	118.80
SD:	14.49	12.01	14.48	16.90	15.29	13.49

Source	df	MS	F	P
Between Groups	5	463.13	2.12	.06
Within Groups	174	218.19		
Total	179	225.03		

TABLE 25

TWO-WAY CLASSIFICATION (GRADE AND RACE) ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES

(a) Grades 1 and 3

Source	df	Mean Square	F	P
Between				
Grades 1 and 3 (A)	1	62.98	.30	.59
Races[a] (B)	1	7.24	.03	.85
A × B	1	228.88	1.10	.30
Within	55	209.01		
Total	58	203.35		

Note.-There were no Anglos in Grade 1 and only one Anglo in Grade 3.

[a] Mexican-Americans and Negroes

b. Grades 2, 4, 5, 6

Source	df	Mean Square	F	P
Between				
Grades 2,4,5, 6 (A)	3	472.97	2.26	.08
Races[a] (B)	2	357.16	1.71	.18
A × B	6	356.07	1.70	.13
Within	108			
Total	119			

[a] Anglos, Mexican-Americans, Negroes

TABLE 26

TWO-WAY CLASSIFICATION (GRADE AND FAMILY SIZE) ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES

Source	df	Mean Square	F	P
Between				
Grades (A)	5	404.07	1.93	.09
Family Sizes (B)	1	253.42	1.21	.27
A x B	5	512.64	2.45	.04
Within	168	209.22		
Total	179	223.39		

TABLE 27

TWO-WAY CLASSIFICATION (GRADE AND BIRTH ORDER) ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES

Source	df	Mean Square	F	P
Between				
Grades (A)	5	550.63	2.62	.03
Birth Order	1	6.07	.03	.85
A × B	5	502.56	2.39	.04
Within	168	210.26		
Total	179	226.79		

Hypothesis I, as a whole, was not supported by the evidence. Differences in self-concept scores, which would be significant, had been expected to occur between several of the groupings, and especially between oldest and non-oldest children since it was presumed that the assumption of responsibilities by the "oldest child" in the low-income culturally different population would affect his self-concept and result in its being significantly different from that of the "non-oldest child." As reported, however, only when children were classified according to their race did they obtain a significant difference in mean self-concept scores.

Hypothesis II There will be significant differences in mean self-concept ratings at some grade levels but not at other grade levels for children classified according to: (a) Race, (b) Sex, (c) Family Size, (d) Birth Order.

These data were analyzed by using Veldman's Program ANOVAR for single classification analysis of variance. The analysis revealed that results varied according to group membership. For example, a significant difference among races occurred only at the fifth grade, with Anglos having the highest (or most positve) self-concept, with Negroes having a lower self-concept, and with Mexican-Americans having the lowest self-concept of all. A further analysis, using the modified _t_-test formula, suggested that this difference was significant at the fifth grade between Anglos and Mexican-Americans, between Anglos and Negroes, and also between Mexican-Americans and Negroes.

No significant difference in mean self-concept scores was obtained between males and females at any grade.

The assumption that different demands and responsibilities for specific groups (i.e., for physical prowess in males at higher grade levels) would influence the self-concept and cause grade levels of these groups to differ significantly in self-concept scores was not supported by the findings.

The obtained _F_'s indicated that there were significant differences between children from large- and small-sized families at the third grade and at the sixth grade in their mean self-concept scores.

Significant differences in mean self-concept scores between the oldest child and the non-oldest child were found to be present at the fifth and at the sixth grade levels.

Tables 28-31 present these results.

Hypothesis III There will be significant differences in mean self-concept ratings among the six different grade levels for the following subgroups of children: (a) Anglos, (b) Mexican-Americans, (c) Negroes, (d) Males, (e) Females, (f) Children from large-sized families, (g) Children from small-sized families, (h) Oldest children, (i) Non-oldest children.

In general, results do not support this hypothesis. Only children from large-sized families and oldest children, respectively, differed significantly across grades. An investigation of their mean scores indicates that children from these two groups had lower self-concepts when they started school than any group of children except the Mexican-Americans. These results are presented in Tables 32-40.

TABLE 23

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR RACE FOR GRADES 1, 2, 3, 4, 5, 6

Grade	Races	N	Mean Self-Concept Score	Source	df	Mean Square	F	P
	Anglo[a]			Between	1	79.74	.36	.56
1	Mex-Amer	14	111.86	Within	28	221.98		
	Negro	16	115.13	Total	29	217.08		
	Anglo	13	126.67	Between	2	6.43	.04	.96
2	Mex-Amer	15	124.40	Within	27	159.70		
	Negro	12	124.83	Total	29	149.13		
	Anglo[b]	1		Between	1	154.16	.79	.61
3	Mex-Amer	12	117.92	Within	27	195.55		
	Negro	17	113.24	Total	28	194.08		
	Anglo	2	109.50	Between	2	161.79	.53	.60
4	Mex-Amer	14	114.93	Within	27	305.49		
	Negro	14	120.29	Total	29	293.88		
	Anglo	2	140.50	Between	2	995.22	5.35	.01
5	Mex-Amer	14	113.07	Within	27	186.20		
	Negro	14	126.00	Total	29	241.99		
	Anglo	5	126.80	Between	2	240.49	1.30	.29
6	Mex-Amer	12	119.25	Within	27	184.44		
	Negro	13	115.31	Total	29	188.30		

Note.-Anglos were eliminated from the analysis of variance.

[a] No. Anglos in grade 1.

[b] Only one Anglo in grade 3.

TABLE 29

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR SEX FOR GRADES 1, 2, 3, 4, 5, 6

Grade	Sex	N	Mean Self-Concept Score	Source	df	Mean Square	F	P
	Males	15	112.13	Between	1	64.53	.29	.60
1	Females	15	115.06	Within	28	222.52		
				Total	29	217.08		
	Males	15	121.53	Between	1	320.13	2.24	.14
2	Females	15	128.07	Within	28	143.02		
				Total	29	149.13		
	Males	15	117.13	Between	1	28.03	.13	.73
3	Females	15	115.20	Within	28	217.04		
				Total	29	223.79		
	Males	15	114.93	Between	1	136.53	.45	.51
4	Females	15	119.20	Within	28	301.26		
				Total	29	295.58		
	Males	15	122.60	Between	1	83.33	.34	.57
5	Females	15	119.27	Within	28	247.66		
				Total	29	241.99		
	Males	15	115.60	Between	1	307.20	1.67	.20
6	Females	15	122.00	Within	28	184.06		
				Total	29	188.30		

TABLE 30

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR FAMILY SIZE FOR GRADES 1, 2, 3, 4, 5, 6

Grade	Family Size	N	Mean Self-Concept Score	Source	df	Mean Square	F	P
	Large	19	110.32	Between	1	558.91	2.73	.11
1	Small	11	119.27	Within	28	204.87		
				Total	29	217.08		
	Large	16	127.19	Between	1	195.43	1.33	.26
2	Small	14	122.07	Within	28	147.48		
				Total	29	149.13		
	Large	16	121.13	Between	1	842.92	4.33	.04
3	Small	14	110.50	Within	28	194.69		
				Total	29	217.04		
	Large	13	114.54	Between	1	146.64	.49	.50
4	Small	17	119.00	Within	28	300.90		
				Total	29	295.58		
	Large	16	117.69	Between	1	361.21	1.52	.23
5	Small	14	124.64	Within	28	237.74		
				Total	29	241.99		
	Large	15	113.93	Between	1	710.53	4.19	.05
6	Small	15	123.67	Within	28	169.65		
				Total	29	188.30		

Note.-Large family size has five or more children; small size family has four or fewer children.

TABLE 31

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR BIRTH ORDER FOR GRADES 1, 2, 3, 4, 5, 6

Grade	Birth Order	N	Mean Self-Concept Scores	Source	df	Mean Square	F	P
	Oldest	5	107.40	Between	1	230.64	1.07	.31
1	Non-Oldest	25	114.84	Within	28	216.59		
				Total	29	217.08		
	Oldest	8	118.50	Between	1	432.98	3.12	.09
2	Non-Oldest	22	127.09	Within	28	138.99		
				Total	29	149.13		
	Oldest	9	114.78	Between	1	24.80	.11	.74
3	Non-Oldest	21	116.76	Within	28	223.91		
				Total	29	217.04		
	Oldest	6	113.50	Between	1	95.41	.32	.59
4	Non-Oldest	24	117.96	Within	28	302.73		
				Total	29	295.58		
	Oldest	8	130.88	Between	1	1078.22	5.08	.03
5	Non-Oldest	22	117.32	Within	28	212.13		
				Total	29	241.99		
	Oldest	8	127.25	Between	1	778.94	4.66	.03
6	Non-Oldest	22	115.73	Within	28	167.21		
				Total	29	188.30		

TABLE 32

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR ANGLOS FOR GRADES 2, 4, 5, 6

	2	4	5	6
N:	3	2	2	5
M:	126.67	109.50	140.50	126.80

Source	df	MS	F	P
Between Groups	3	323.08	1.64	.25
Within Groups	8	196.56		
Total	11	231.06		

Note.-No Anglos in grade 1; one Anglo in grade 3.

TABLE 33

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR MEXICAN-AMERICANS FOR GRADES 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
N:	14	15	17	14	14	12
M:	104	124.40	113.23	114.93	113.07	119.25

Source	df	MS	F	P
Between Groups	5	667.32	1.85	.11
Within Groups	80	361.51		
Total	85	379.50		

TABLE 34

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR NEGROES FOR GRADES 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
N:	16	12	12	14	14	13
M:	115.13	124.83	117.92	120.29	126.00	115.31

Source	df	MS	F	P
Between Groups	5	300	1.48	.21
Within Groups	75	202.85		
Total	80	208.93		

TABLE 35

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR MALES FOR GRADES 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
N:	15	15	15	15	15	15
M:	112.13	121.53	117.13	114.93	122.60	115.60

Source	df	MS	F	P
Between Groups	5	243.66	1.07	.38
Within Groups	84	227.02		
Total	89	227.95		

TABLE 36

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR FEMALES FOR GRADES 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
N:	15	15	15	15	15	15
M:	115.07	128.07	115.20	119.20	119.27	122

Source	df	MS	F	P
Between Groups	5	352.16	1.65	.16
Within Groups	84	213.76		
Total	89	221.53		

TABLE 37

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR LARGE-SIZED FAMILIES FOR GRADES 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
N:	19	16	16	13	15	16
M:	110.32	127.16	121.13	114.54	117.69	113.93

Source	df	MS	F	P
Between Groups	5	599.24	2.83	.02
Within Groups	89	211.86		
Total	94	232.47		

Note.-Large-sized family has five or more children.

TABLE 38

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR SMALL-SIZED FAMILIES FOR GRADES 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
N:	11	14	14	17	14	15
M:	119.27	122.07	110.50	119.00	124.64	123.67

Source	df	MS	F	P
Between Groups	5	369.78	1.79	.12
Within Groups	79	206.24		
Total	84	215.98		

TABLE 39

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR OLDEST CHILDREN FOR GRADES 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
N:	5	8	9	6	8	8
M:	107.4	118.50	114.78	113.50	130.88	127.25

Source	df	MS	F	P
Between Groups	5	534.31	2.51	.04
Within Groups	38	213.28		
Total	43	250.61		

TABLE 40

SUMMARY DATA AND ANALYSIS OF VARIANCE FOR NON-OLDEST CHILDREN FOR GRADES 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
N:	25	22	21	24	22	22
M:	114.84	127.09	116.76	117.96	117.32	115.73

Source	df	MS	F	P
Between Groups	5	158.38	.64	.67
Within Groups	130	246.29		
Total	135	243.04		

Hypothesis IV (a) No significant relationship will be found between self-concept and achievement, with the effect of intelligence held constant.

(b) A significant relationship will be found between self-concept and intelligence, with the effect of achievement held constant.

These hypotheses were examined by obtaining Pearson product-moment correlations between self-concept and achievement and between self-concept and intelligence, using Poynor's Program CORID. These correlations were then used to obtain first-order partial correlations, using the general formula

$$r_{12,3} = \frac{r_{12} - r_{13}\, r_{23}}{\sqrt{(1 - r_{13}^2)(1 - r_{23}^2)}}$$

First, intelligence was held constant; achievement was next held constant. Results which were obtained are presented in Table 41.

These results do not disagree with the findings of previous investigators (Bodwin, 1959; Coopersmith, 1959; Lumpkin, 1959; Davidson and Lang, 1960; Seay, 1961;

TABLE 41

CORRELATIONS BETWEEN SELF-CONCEPT AND ACHIEVEMENT AND INTELLIGENCE

Partial correlations between self-concept and achievement, with intelligence held constant, and between self-concept and intelligence, with achievement held constant

		Achievement		Intelligence	
Variable	N	r	$r_{partial}$	r	$r_{partial}$
Race					
Anglo	13	31	-.12	.52	.47
Mexican-American	86	-.05	-.08	.18	.19
Negro	81	.01	-.07	.31**	.32**
Sex					
Male	90	.03	-.03	.30**	.30**
Female	90	.03	-.06	.31**	.30**
Family Size					
Large Family, 5 or more	95	-.08	.13	.23*	.25**
Small Family, 4 or fewer	85	.11	.00	.39**	.36**
Birth Order					
Oldest Child	44	-.03	-.13	.42**	.42**
Non-Oldest Child	134	.05	-.03	.28**	.30**
Only Child[a]					
Grade					
1st Grade	30	.09	.03	.17	.14
2nd Grade	30	.09	.04	.20	.18
3rd Grade	30	.36*	.31	.23	.11
4th Grade	30	.36*	.27	.28	.13
5th Grade	30	-.08	.19	.61**	.61**
6th Grade	30	.18	.05	.37*	.34
Total Sample					
All Groups Combined	180	.18*	.16*	.31**	.30**

Note.-Achievement scores were obtained on the Metropolitan Achievement Tests; intelligence scores were obtained on the California Test of Mental Maturity. Self-concept scores were obtained on the Inferred Self-Concept Scale.

[a] There were two children in the "only" category.

*p $<.05$

**p $<.01$

Lamy, 1965) that self-concept is, in general, positively related to achievement. However, these obtained relationships did not achieve significance. Furthermore, when intelligence was held constant, the relationship became a negative one; none of these negative relationships were significant, however.

The relationship of intelligence to self-concept was found to be positive and significant at the .01 level for: Negroes, males, females, children from large and small families, oldest children, and for 5th and 6th graders. After partialing out the effect of achievement on scores, practically the same relationship was observed. It would seem that intelligence indeed has much bearing on self-concept.

Hypothesis V

(a) A significant relationship will be found between self-concept and the specific behavioral variable, language intelligence, as measured by test scores on a standard test of intelligence.

(b) No significant relationship will be found between self-concept and the specific behavioral variable, nonlanguage intelligence, as measured by test scores on a standard test of intelligence.

These hypotheses were examined by obtaining Pearson product-moment correlations between self-concept and language intelligence and between self-concept and nonlanguage intelligence, through the use of Poynor's Program CORID. These correlations were used, rather than partial correlations holding achievement constant, since achievement seemed to have little, if any, effect on intelligence scores in the examination of Hypothesis IVb. The results are presented in Table 42.

Hypothesis Va was supported, but Hypothesis Vb was refuted, by the results obtained. Both language and nonlanguage intelligence were found to be positively related to self-concept ($p. < .01$).

Hypothesis VI There will be no significant difference in mean self-concept ratings obtained six months apart.

Analyses of mean self-concept scores obtained by the different subgroups, using Veldman's Program ANOVAR for change-over-time analysis of variance, revealed that there was a significant difference (in the negative direction) between scores obtained on the two occasions by the total sample (see Tables 43-47, pp. 100-104).

TABLE 42

CORRELATIONS BETWEEN SELF-CONCEPT AND LANGUAGE INTELLIGENCE, NON-LANGUAGE INTELLIGENCE, AND TOTAL INTELLIGENCE

Variable	N	CTMM_{L}	CTMM_{NL}	$\text{CTMM}_{\text{Total}}$
Race				
Anglo	13	.33	.57*	.52
Mexican-American	86	.22*	.17	.18
Negro	81	.32**	.22*	.31**
Sex				
Male	90	.32	.24*	.30**
Female	90	.30	.25*	.31**
Family Size				
Large Family, 5 or more	95	.22*	20	.23*
Small Family, 4 or fewer	85	.41*	.31*	.39**
Birth Order				
Oldest Child	44	.44**	.35*	.42**
Non-Oldest Child	134	.27**	.23**	.28**
Only Child[a]				
Grade				
1st Grade	30	.25	.00	.17
2nd Grade	30	.26	.10	.20
3rd Grade	30	.44*	.13	.23
4th Grade	30	.24	.29	.28
5th Grade	30	.57**	.54**	.61**
6th Grade	30	.28	.32**	.37*
Total Sample				
All Groups Combined	180	.33**	.25**	.31**

Note.-Intelligence scores were obtained on the California Tests of Mental Maturity: Language, Non-Language, Total. Self-concept scores were obtained on the Inferred Self-Concept Scale.

[a] There were two children in the "only" category.

*$p < .05$

**$p < .01$

Hypothesis VII There will be significant differences in self-concept ratings obtained six months apart among subgroups of children classified according to: (a) Race, (b) Sex, (c) Family Size, (d) Birth Order, (e) Grade Level.

No significant differences between subgroups in the amount of change in the negative direction during the six months period were found to be present (Tables 43-47).

The significant difference (in the negative direction) between scores obtained on the two occasions by the total sample was obtained by Negroes, by males, by children from small-sized families, and by oldest children. These results may be found in Tables 48-56.

Believing that the initial self-concept scores obtained in October might make it difficult to analyze changes in mean self-concept scores for specific groups, it was decided to conduct a covariance analysis and, thus, to nullify the effects of different self-concept scores obtained in October. Accordingly, the data were analyzed, using Veldman's Program COVARY. Results indicated that no significant difference existed even when the October scores were held constant, between races, between sexes, or between oldest and non-oldest children in the amount of negative change in self-concept that occurred. A difference, significant at the .05 level was found to exist, however, between the amount of change that occurred in children from large- and small-sized families, with children from large families evidencing a smaller decrease in self-concept. The effect of grade level on score changes was also analyzed and it was determined that interaction effects were present to a significant degree for Negroes and, also, for children from large-sized families. These results are presented in Tables 43-56.

TABLE 43

(a) MEANS FOR PRE-AND POST SELF-CONCEPT SCORES BY RACE

	Anglo	Mexican-American	Negro	Trial Mean
October	127.62	116.05	119.78	118.56
April	122.92	115.92	115.37	116.18
Group Mean	125.27	115.98	117.57	

Note.-N for Anglo = 13 in each cell.
N for Mexican-American = 86 in each cell.
N for Negroes = 81 in each cell.

(b) ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR THE RACIAL GROUPS, FOR GRADES 1-6, COMBINED

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	511.225	6.531	.01
Races (B)	2	980.094	2.581	.08
Interaction (A X B)	2	209.658	2.688	.07
Between	177	379.797		
Within	177	78.2992		
Total	359	233.910		

TABLE 44

(a) MEANS FOR PRE-AND POST SELF-CONCEPT SCORES BY SEX

	Male	Female	Trial Mean
October	117.32	119.80	118.56
April	114.48	117.88	116.18
Group Mean	115.90	118.84	

Note.-N = 90 for each cell.

(b) ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR TWO SEX GROUPS, FOR GRADES 1-6, COMBINED

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	511.225	6.38	.01
Sexes (B)	1	777.336	2.02	.15
Interaction (A x B)	1	19.136	2.40	.63
Between				
Within				
Total				

TABLE 45

(a) MEANS FOR PRE-AND POST SELF-CONCEPT SCORES BY FAMILY SIZE

	Large	Small	Trial Mean
October	117.37	119.89	118.56
April	116.97	115.29	116.18
Group Mean	117.17	117.59	

Note.-N for large = 95 in each cell.
N for small = 85 in each cell.

(b) ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR THE TWO FAMILY SIZE GROUPS, FOR GRADES 1-6, COMBINED

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	511.225	6.56	.01
Family Sizes (B)	1	16.259	.04	.83
Interaction (A x B)	1	359.675	5.07	.02
Between	178	388.584		
Within	178	77.992		
Total	359	233.910		

TABLE 46

(a) MEANS FOR PRE-AND POST SELF-CONCEPT SCORES BY BIRTH ORDER

	Oldest	Non-Oldest	Trial Mean
October	119.64	118.21	118.56
April	114.43	116.18	116.18
Group Mean	117.03	117.48	

Note.-N for oldest = 44 in each cell.
N for non-oldest = 136 in each cell.

(b) ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR THE OLDEST AND NON OLDEST GROUPS, FOR GRADES 1-6, COMBINED

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	511.225	6.48	.01
Birth Orders (B)	1	13.099	.03	.85
Interaction (A x B)	1	231.754	2.94	.08
Between	178	388.603		
Within	178	78.913		
Total	359	233.911		

TABLE 47

(a) MEANS FOR PRE-AND POST SELF-CONCEPT SCORES BY GRADE LEVEL

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Trial Mean
October	113.60	124.80	116.17	117.06	120.93	118.80	118.56
April	114.10	117.63	112.40	114.83	117.50	120.60	116.18
Group Mean	113.85	121.22	114.28	115.95	119.22	119.70	

Note.-N = 30 for each cell.

(b) ANALYSIS OF VARIANCE OF MEAN SELF CONCEPT SCORES ON TWO OCCASIONS FOR THE SIX GRADE LEVELS

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	511.225	6.59	.01
Grade Levels (B)	5	570.843	1.50	.19
Interaction (A x B)	5	155.198	2.00	.08
Between	174	381.208		
Within	174	77.599		
Total	359	233.911		

TABLE 48

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR DIFFERENT GRADE LEVELS, FOR ANGLOS

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	130.67	3.81	.08
Grade Levels (B)	3	566.83	1.23	.36
Interaction (A X B)	3	61.63	1.80	.23
Between	8			
Within	8	34.30		
Total	23	260.75		

TABLE 49

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR DIFFERENT GRADE LEVELS, FOR MEXICAN-AMERICANS

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	.7035	.009	.92
Grade Levels (B)	5	1281.26	1.96	.09
Interaction (A × B)	5	32.24	.411	.84
Between	80	653.64		
Within	80	78.43		
Total	171	380.90		

TABLE 50

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR DIFFERENT GRADE LEVELS, FOR NEGROES

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	786.72	9.76	.003
Grade Levels (B)	5	206.02	.55	.74
Interaction (A x B)	5	183.92	2.28	.05
Between	75	373.29		
Within	75	80.59		
Total	161	228.43		

TABLE 51

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR DIFFERENT GRADE LEVELS, FOR MALES

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	364.09	5.06	.03
Grade Levels (B)	5	243.84	.55	.74
Interaction (A x B)	5	149.25	2.08	.08
Between	84	446.74		
Within	84	71.91		
Total	179	256.40		

TABLE 52

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR DIFFERENT GRADE LEVELS, FOR FEMALES

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	166.27	1.94	.16
Grade Levels (B)	5	533.62	1.66	.15
Interaction (A × B)	5	53.03	.62	.69
Between	84	321.35		
Within	84	85.80		
Total	179	208.38		

TABLE 53

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR DIFFERENT GRADE LEVELS, FOR CHILDREN FROM LARGE-SIZED FAMILIES

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	7.60	.083	.77
Grade Levels (B)	5	609.93	1.63	.16
Interaction (A x B)	5	212.08	2.33	.05
Between	89	373.40		
Within	89	91.19		
Total	189	240.56		

TABLE 54

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR DIFFERENT GRADE LEVELS, FOR CHILDREN FROM SMALL-SIZED FAMILIES

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	899.30	15.80	.00
Grade Levels (B)	5	595.36	1.57	.18
Interaction (A × B)	5	41.93	.737	.60
Between	79	378.59		
Within	79	56.92		
Total	169	227.76		

TABLE 55

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS
FOR DIFFERENT GRADE LEVELS, FOR OLDEST CHILDREN

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	595.92	13.76	.001
Grade Levels (B)	5	954.74	2.53	.04
Interaction (A × B)	5	39.69	.916	.52
Between	38	377.70		
Within	38	43.32		
Total	87	247.90		

TABLE 56

ANALYSIS OF VARIANCE OF SELF-CONCEPT SCORES ON TWO OCCASIONS FOR DIFFERENT GRADE LEVELS, FOR NON-OLDEST CHILDREN

Source	df	Mean Square	F	P
Pre and Post Measures (A)	1	147.06	1.67	.20
Grade Levels (B)	5	445.33	1.21	.31
Interaction (A × B)	5	156.60	1.78	.12
Between	130	367.83		
Within	130	87.84		
Total	271	230.24		

C H A P T E R I V

DISCUSSION AND CONCLUSION

Inferred Self-Concept Scale

An extensive examination of examiner reliability, which included investigations of their agreement, or lack of it, for individual items, for total scale scores, and for individual scale scores, revealed that examiners are in substantial agreement in making ratings based on the Inferred Self-Concept Scale. Reliability coefficients beyond the .05 level of significance were obtained in each instance. An additional finding was that teacher ratings, although correlated highly with counselor ratings ($p. < .01$), are consistently and significantly higher than counselor ratings. It is the experimenter's opinion, reflecting the view that the student "will see himself as others see him," that teacher ratings, which are based on more observations and a closer relationship with the child than are counselor ratings, are more apt to be accurate for judging the

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student's self-concept. It will be necessary to obtain an acceptable criterion measure of positive self-concept in order to prove or disprove such an assumption, so only a replication of the study when such a criterion measure is available will answer this question in a definitive fashion.

Extensive investigations of test reliability were also made, with split-half reliability, interitem consistency, and test-retest reliability being examined. Correlation coefficients were all significant beyond the .01 level. Items on the Inferred Self-Concept Scale apparently do achieve a satisfactory degree of homogeneity and measure the same attribute on different occasions.

Validity studies of the scale indicated that this scale does measure what it is supposed to measure, based on subjective definitions of acceptable criterion measures. For example, it was found that being an intelligent student and being under-age-in-grade correlated significantly and positively with self-concept. The criterion-oriented validity study obtained findings which appear to contradict expectations. It was found that, for the bright student, having a high self-concept correlated significantly, but negatively, with a derived competency-index. Since the competency index was accomplished by subtracting intelligence, as defined by a California Test of Mental Maturity standard T-score, from achievement, as defined by a Metropolitan Achievement Test standard T-score, it had been assumed that the "low achiever" (the child who scores relatively high in intelligence and relatively low in achievement) would evidence a low self-concept. The opposite finding would indicate to this writer that achievement, as represented in the school by "academic" achievement, does not influence the self-concept of the low-income culturally different child, since it would not be logical to reason that a child who is a high achiever would therefore have a low self-concept. On the contrary, it would seem more logical to reason that, in the school situation, self-concept appears to be antecedent to achievement and that the low-income culturally different child who has a high self-concept has no internal need to accomplish achievement, as achievement is defined by our middle-class system of values. No causal relationship had been suggested between self-concept scores and achievement scores because it is recognized by most educators that the "self-system" of the child who starts to school at the age of five or six has a long history and continues to undergo a continual process of development.

> In the healthy course of the development of the self, one is involved in a continuing process of assimilation and integration of new experiences, new discoveries concerning one's resources, one's limitation, and one's relation with oneself and with others [Jersild, 1952, p. 14].

The present findings appear to reaffirm the opinion that the learner perceives, interprets, accepts, resists, or rejects what he meets at school in the light of the self system he has within him.

Image analysis of items in the Inferred Self-Concept Scale revealed two factors. These were subjectively named Self-Conformity and Self-Attitude. The fact that differences between groups of students were only obtained in the latter factor would reinforce the impression that it is the *belief* or *attitude* of the student that we, as educators, must attempt to alter if we are to effect changes in their motivation toward school. It is not sufficient, apparently, to teach them specific academic skills with the intent of making them more proficient so that they can achieve more, and thus hopefully elevate their self-concepts. Instead, it appears that our problem may be more basic. We must, in a manner yet to be determined, and speculation about which is beyond the scope of this study, instill in these children a realization of the value for them of achieving our middle-class goals. They must be made aware of the fact that academic achievement is merely a "subgoal" which enables the individual to accomplish what he, subjectively, wishes to accomplish.

Hypotheses

The hypotheses proposed in this investigation have not been confirmed in every instance by the analyses of the data. In some cases where predictions about several subgroups have been made, only one aspect of the hypothesis has been confirmed. Findings, in general, however do support basic assumptions and, in some cases, suggest directions for further research.

A review of the literature revealed that it is currently appropriate to think that the "culturally different" child has a negative self-concept and that this negative view of self is continually being reinforced by school experiences. This experimenter felt that there was no evidence to indicate that this was a valid generalization and that, instead, the "typical" child might not have a "negative" self-concept. Instead, reflecting the view that some specific groups of children might, indeed, possess negative self-concepts, but that others would not, it was hypothesized that there would be significant differences in mean self-concept scores between different groupings of children. The failure to find significant differences in self-concept scores between any of the groupings, except for race, would appear to vindicate those who consistently generalize, since their observations are frequently based on a one-race (i.e., Negro) population. Differences, in such instances, are not apparent. The fact that our school populations are legally and increasingly becoming nonsegregated lends importance to the lone significant finding; in groups comprised of various ethnic groups, we cannot generalize in regard to their "common" self-concept. The finding that Anglo children obtained a higher self-concept than Mexican-Americans was significant. Their self-concept was also higher than and differed substantially ($p. < .07$) from Negroes. One can only speculate that these differences could, at least partially, be attributable to the fact that although the three groups in this study share the handicap of low-income, the Anglo child has an advantage; he has neither a language handicap (as the Mexican-American child has) nor a color handicap (as the Negro child has). This advantage could help him in relating to, and communicating with, teachers and others in the school environment. Consequent feedback from these "significant others," in turn, may affect his concept of self and influence this conception to move in a positive direction. The finding that there is a greater difference between the self-concept of Anglos and Mexican-Americans than between those of Anglos and Negroes may attest to the social interaction implicit for acquiring a positive self-concept. The possession of adequate verbal skill--the ability to communicate--is a distinct advantage in social relationships. It is a skill relatively deficient in the life of the typical Mexican-American child.

Findings suggest, that, for the population involved in this investigation, the possession of such skill is of more importance for acquiring a positive self-concept than is the possession of the same colored complexion. Future research and replications of this study could ascertain if this suggestion is verified. It may be hoped that this finding _is_ valid because our educational system is already attempting to compensate for language deficiencies and it can devise different ways to accomplish this if the present methods (which are currently being investigated in other research) are not accomplishing their intent.

The difference between mean self-concept scores obtained by each of the six grade-levels approaches significance (.06) and an examination of mean scores for each of the groups of students revealed that mean scores obtained in the second grade were generally highest. In fact, self-concepts of the second graders were significantly higher than those of the first, third, fourth, fifth, or sixth grades. It has been suggested that since first grade is the grade level at which more children are retained than any other, the second graders may feel that they are "select" and, in fact, probably are. Such a feeling may be reflected in their self-concept scores.

It was determined that the significant differences in self-concept scores between Anglos and Mexican-Americans actually occurred at the fifth grade level. This was an interesting finding because for almost every group of students, the fifth grade revealed relatively high self-concepts. The Mexican-American group of children had a much lower self-concept mean score for this grade level than did any other. Again, one can only speculate about the demands within this population for the fifth grade child and the effect of them on self-concept scores. Is the male child expected to earn part of the family income? Is the female child expected to act as a mother substitute? Further research in this area is needed before the answers to these and similar questions can be meaningfully interpreted.

The lack of a significant relationship between self-concept and academic achievement, when intelligence was held constant, was not unexpected for this low-income culturally different population. In fact, this finding is consistent with evidence previously discussed which suggests that it is the "attitude" of the student which is of the utmost importance in motivating him to "achieve," and that the self-concept of the more intelligent child in this culture is negatively related to achievement. If achievement is of no merit, according to his system of values, achievement will not be related to his concept of self.

It seems apparent that educators must relate a need for achievement to the value system of the specific population so that the individual student will consider such achievement desirable and necessary. The finding that self-concept decreased significantly for the entire group during the six months period in school, with no significant difference between different groups in the rate of change in a negative direction, would suggest that our current attempt to improve the self-concept of the low-income culturally different population is not succeeding.

Conclusion

This study has determined functional relationships which exist between the self-concept of low-income culturally different children in a school setting and specific organismic and behavioral variables. The establishment of these relationships and an examination of changes in self-concept after six months in school have revealed that the concept of self held by these children, as assessed by the Inferred Self Concept Scale, is "positive." The typical child does not evidence a "negative" self-concept, as has been frequently suggested. Moreover, the concept of self is not the same for every grouping of children and we cannot generalize about the self-concept of the "culturally different child."

The finding most important at this time, in the opinion of the investigator, is that the self-concepts of all groups investigated declined significantly during the six months period between assessments. Evidence suggests that we, as educators, must reexamine our goals and relate them to the value system of this particular population. Specifically, in an area where educators can be most effective, evidence has suggested that verbal skill may be of great importance in this population for the acquisition of a positive self-concept. It is hoped that further research in this particular area will be accomplished.

APPENDIX

1. SAMPLING INSTRUCTIONS

1. The following procedure will give you the names of the six teachers (one randomly selected for each grade) who will be asked to cooperate for purposes of this evaluation:

   a. Place slips of paper with the names of your first grade teachers in a box; mix; withdraw one.
   b. Repeat this procedure for each grade.

2. The next procedure will give you the names of the boys and girls who will be used in this evaluation:

   a. Ask the teacher selected from the first grade to have each boy and each girl (with help as needed) write his (her) name on a small piece of paper. Collect these; place them in a container; mix; withdraw names--using the first boy's name withdrawn as the boy and the first girl's name withdrawn as the girl for that grade.
   b. Repeat this procedure for each grade.
   c. Keep a list of these twelve children's names (a boy and girl from each grade).

3. Complete the Self-Concept Judgment Scale as soon as it is possible for you to observe these twelve children.

4. Ask each of the six randomly selected teachers to complete an identical scale for the two children who are in his (her) room.

5. When the 24 forms (12 by the counselor and two by each of the six teachers) are completed, place them in an envelope and return them to the Administration Building.

2. 100 ITEMS RELATED TO SELF-CONCEPT IN A SCHOOL SETTING

___ 1. Enjoys working with others
___ 2. Seems satisfied with level of performance
___ 3. Is unfriendly to classmates
___ 4. Acts rebellious
___ 5. Appears worried
___ 6. Exhibits self-confidence
___ 7. Seems jealous
___ 8. Regards situation as hopeless
___ 9. Lacks self control
___10. Is fearful
___11. Participates eagerly in school setting
___12. Lacks motivation
___13. Evidences strong pleasure in good work
___14. Is courteous
___15. Concerned with lessons
___16. Unquestioning
___17. Plays with smaller or younger children
___18. Has unrealistic expectations for himself
___19. Lacks curiosity
___20. Appears happy
___21. Seems bashful
___22. Is helpful
___23. Is antagonistic to adults
___24. Is friendly
___25. Seems thoughtful
___26. Is kind
___27. Is lazy
___28. Seems cooperative
___29. Is cheerful
___30. Is easily discouraged
___31. Appears unsociable
___32. Cries easily
___33. Picks on small children
___34. Volunteers
___35. Seems unhappy
___36. Is withdrawing
___37. Gets angry
___38. Is careful in his work
___39. Is discouraged easily
___40. Gets upset
___41. Is disobedient
___42. Tries to dominate
___43. Is impertinent
___44. Appears restless
___45. Seems sullen
___46. Is overly good
___47. Is inattentive
___48. Appears nervous

___49. Lies

___50. Fights

___51. Is a physical coward

___52. Tattles

___53. Has temper tantrums

___54. Provokes hostility from classmates

___55. Engages in aggressive play

___56. Teases

___57. Appears compliant

___58. Provokes hostility from teacher

___59. Is obedient

___60. Dreads going to school

___61. Interfers with other children's work

___62. Lacks interest in class work

___63. Is quarrelsome

___64. Is unreliable

___65. Talks compulsively

___66. Is polite

___67. Is afraid of teacher

___68. Feels he is "picked on" by classmates

___69. Gives up easily

___70. Thinks most children like him

___71. Thinks his teacher likes him

___72. Is a bully

___73. Is a poor loser

___74. Finds fault with others

___75. Lacks self reliance

___76. Seems to have a "chip on his shoulder"

___77. Makes excuses

___78. Makes excuses for poor performance on playground

___79. Is defiant

___80. Thinks he is always right

___81. Likes his peers

___82. Likes his teacher

___83. Makes fun of other children

___84. Appears tired

___85. Is embarrassed

___86. Seems to "follow" other children

___87. Is competitive with other children

___88. Is patient

___89. Ready to accept blame when at falut

___90. Tries to be "different" from peers

___91. Thinks he is never right

___92. Is argumentative

___93. Has his feelings hurt

___94. Feels he must please everyone

___95. Controls temper

___96. Seems confused

___97. Is stubborn

___98. Exhibits unpredictable behavior

___99. Is "over-sensitive"

___100. Is trusting

3. INFERRED SELF-CONCEPT JUDGMENT SCALE FOR USE IN A SCHOOL SETTING

We are concerned here with your judgment of the student's "view of himself" ("self-concept") as it is generated by and in the school setting. You are asked to describe your perception of a student's self-concept in terms of the following items. Please indicate your rating on each item, using the scale below.

1. ______ Never
2. ______ Seldom
3. ______ Sometimes
4. ______ Usually
5. ______ Always

___ 1. Enjoys working with others
___ 2. Exhibits self-confidence
___ 3. Plays with smaller or younger children
___ 4. Evidences strong pleasure in good work
___ 5. Is antagonistic to adults
___ 6. Has unrealistic expectations for himself
___ 7. Is easily discouraged
___ 8. Appears unsociable
___ 9. Cries easily
___10. Is unfriendly to classmates
___11. Tries to dominate or bully
___12. Fights
___13. Talks compulsively
___14. Seems afraid of teacher
___15. Feels he is "picked on" by classmates
___16. Gives up easily
___17. Is defiant
___18. Thinks he is right
___19. Is ready to accept blame when at fault
___20. Is trusting
___21. Seems to have a "chip" on his shoulder
___22. Is quarrelsome or argumentative
___23. Is "over-sensitive"
___24. Provokes hostility from classmates
___25. Thinks his teacher likes him
___26. Tattles
___27. Is withdrawing
___28. Is fearful
___29. Seems satisfied with level of performance
___30. Appears worried

CHILD'S NAME ____________________

SCHOOL ________________________ GRADE ________

4. INFERRED SELF-CONCEPT SCALE SCORING KEY

1. Circle the ratings for Items 1 , 2, 4, 18, 19, 20, 25, 29; these ratings are the "rating points" for these items.

2. Place the following "rating points" to the left of the item ratings not circled:

   Rating of _5_ = 1
   Rating of _4_ = 2
   Rating of _3_ = 3
   Rating of _2_ = 4
   Rating of _1_ = 5

3. Add the total number of "ratings points" to obtain the self-concept score and place this score in bottom right hand corner of page.

Interpretation:

The total self-concept score can be divided by thirty and the resulting number can be thought of as a point on a continuum between 1 and 5, with 1 representing a socially undesirable (or negative) and 5 representing a socially desirable (or positive) concept of self.

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